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## Financing Maine's State Employees and Teachers Retirement System: Comparative Trends and Progress, 1982 - 2010

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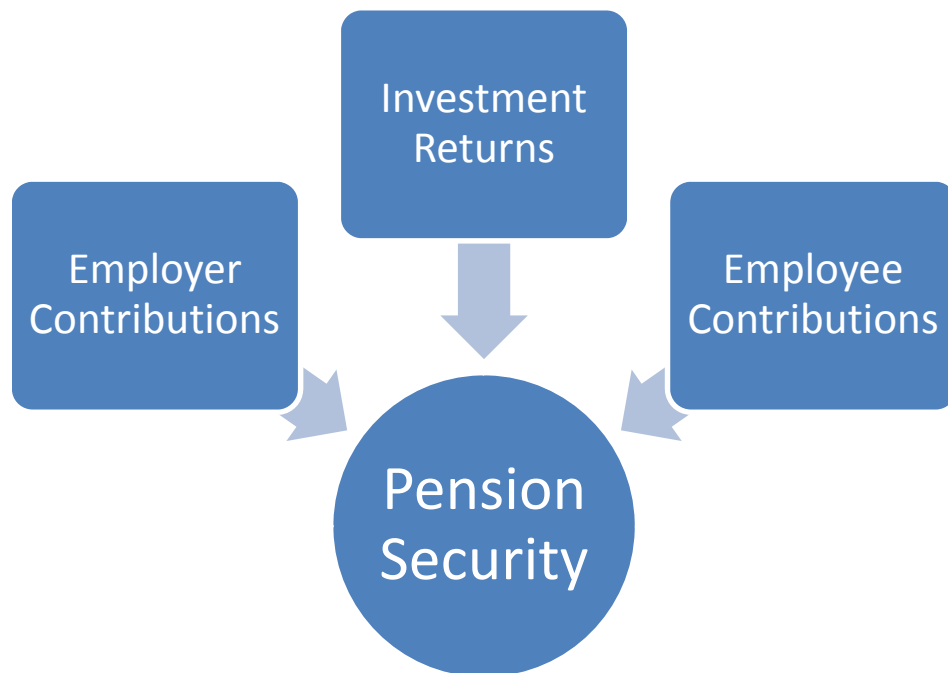
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# **Financing Maine's State Employees and Teachers Retirement System: Comparative Trends and Progress, 1982-2010**

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**PPM Capstone Report Prepared by:**

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**September 2011**

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## **I. Introduction<sup>1</sup>**

The Great Recession has had widespread implications for the financial well-being of millions of Americans. With the collapse of the housing market beginning in 2007, many have found themselves unemployed or underemployed, all while locked into home mortgages that they can no longer afford. Dreams of retirement, along with hard-saved nest eggs, have evaporated for many, especially after the collapse of the stock market.

Along with these stories of personal hardship, many states have experienced historic reductions in tax revenues during the Great Recession. While it appears that state revenues are now stable, they are still well below the heights prior to the 2008 fiscal year and few experts project a quick rebound (NCSL, 2011). The loss in tax revenue was backfilled to some extent by an influx of federal funds through the American Recovery and Reinvestment Act of 2009, but now those funds are drying up amid concerns of the federal budget deficit. As state legislatures and governors begin considering spending plans for the upcoming fiscal year, they are faced with some very difficult budget choices.

Among the many tough choices states must make is how to address funding shortfalls in public employee pension systems. In public sector employment, pensions have long been a key component of the compensation system and an integral way to attract and retain talent in public service positions. The pension is considered a form of deferred compensation, which means that workers receive a salary lower than the going rate for their education, skills and job requirements in exchange for an enhanced retirement package (Bender & Heywood, 2010). State employees incur an opportunity cost by taking a lower-salaried state job over a private sector job. While the

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<sup>1</sup> This section was researched and written by Morgan Beschle & Tim Feeley.

salaries of state jobs have traditionally been lower, benefit packages have tended to compensate for the difference.

There is growing concern and controversy surrounding the unfunded liabilities for state employee pensions and other retiree benefits. The precipitous drop in the stock market hugely impacted the solvency of many funds. Reports of “Trillion Dollar Gaps” (PEW, 2009) in the states’ pension plans certainly cause alarm for any budget planner. Unfortunately, when it comes to retirement benefits financing, legislators face an uphill battle. Projections and evaluations of solutions are hampered by a confluence of factors including the continuing retirement of the Baby Boom Generation, gutted stock market values and other investment losses, the present fiscal instability of states and lagging income tax revenues, and the years of underfunding of pension trust funds. Constitutional limitations on policy alternatives further constrain the options presented to lawmakers. Also, by making the state government job’s benefit package less attractive, legislators could be causing an inadvertent brain drain from the state government sector, losing their most competitive and valuable prospective employees (Caron & Osborne, 2010).

As many state legislatures across the country face difficult decisions regarding policies and action plans to address these unfunded liabilities, it is vital that decision makers understand how pension systems work and how action plans could impact states’ ability to fulfill commitments. Understanding public pension systems is hampered by a voluminous and technical vocabulary. This report provides an overview of pension financing concepts and terminology, explains major concepts, and presents comparative financing data. As well as serving a draft for a freestanding primer, this report has been prepared as background for the pension section of a new edition of Josephine LaPlante’s 1993 monograph *Dollars and Sense*:

*Maine State Budgeting at a Crossroads.* We hope that that information provided will help arm Maine legislators with the knowledge necessary to make informed decisions on behalf of the citizens.

## II. TYPES OF PUBLIC PENSION PLANS<sup>2</sup>

Two broad types of retirement funding approaches are used in the public and private sectors: **defined benefit** and **defined contribution** plans. Under a **defined benefit plan**, governmental jurisdictions promise a specified level of retirement benefits, for example, one-half of the average earnings during the last three years of employment. The employing jurisdiction must determine how much money needs to be invested now for funding to be adequate to support promised future income at the time the employee retires. Some states, local governments, and governmental entities like state universities and authorities offer employees a **defined contribution plan**. Under a defined contribution plan, the governmental jurisdiction contributes an agreed upon percentage of salary but makes no promises about the sufficiency of funding for retirement income.

Data from the Bureau of Labor Statistics indicates that in 2008, 84 percent of employees of state and local governments had access to a **defined benefit (DB) plan** and 30 percent could access a **defined contribution (DC) plan** (terms defined below). However, only 22 percent of those working in the private sector could access a DB plan and only 62 percent had a DC plan available to them (Wiatrowski, 2009). Let us consider these funding approaches more closely.

### 2.1 Defined Benefit Plans

Under a defined benefit plan, retirees are guaranteed an annual income for life. The income level is based upon salary level in the last several years of employment and may be adjusted for longevity. For instance, in the state of Maine an employee is eligible after 5 years for a pension that is equal to 2 percent of their average high 3 years of compensation multiplied by their years of service. Most plans also allow for a cost of living adjustment (COLA) to

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<sup>2</sup> This section was researched and written by Morgan Beschle & Tim Feeley.

**Table 1. Characteristics of Defined Benefit and Defined Contribution Plans**

	<b>Defined Benefit (DB) Plan</b>	<b>Defined Contribution (DC) Plan</b>
Employer Contributions	Federal rules set contribution requirements and administer penalties if requirements are not met. Employer contribution is based on a percentage of payroll to cover the actuarially determined annual required contribution.	No requirement that the employer contribute, except in certain types of 401(k) plans. Employer may choose to match a portion of the employee's contributions or to contribute without employee contributions.
Employee Contributions	Generally, employees contribute to these plans based on a percentage of their payroll.	Many plans require the employee to contribute in order for an account to be established.
Managing the Investment	Employer is responsible for ensuring that contributions plus investment earnings will be enough to pay the promised benefit.	Employee often is responsible for managing the investment of his/her account, choosing from investment options offered by the plan.
Amount of Benefits Paid upon the Retiree	Benefit is based on a formula in the plan, often using a combination of the employee's age, years of employment with the employer and/or salary.	Benefit depends on contributions made by the employee and/or the employer and investment earnings. Benefits will depend on market value at the market at the time of payout.
Type of Retirement Benefit Payments	Traditionally, these plans pay the retiree monthly annuity payments that continue for life.	Retiree may transfer the account balance into an individual retirement account (IRA) from which the retiree withdraws money, or may receive it as a lump sum payment. Some plans also offer monthly payments through an annuity.
Guarantee of Benefits	The Federal government, through the Pension Benefit Guaranty Corporation, guarantees some amount of benefits.	No Federal guarantee of benefits.
Leaving Before Retirement Age	If an employee leaves after vesting in a benefit but before the plan's retirement age, the benefit generally stays with the plan until the employee files a claim for it at retirement. Some defined benefit plans offer early retirement options.	Employee may transfer the account balance to an individual retirement account (IRA) or, in some cases, another employer plan, where it can continue to grow based on investment earnings. The employee also may take the balance out of the plan, but will owe taxes and possibly penalties, thus reducing retirement income.
Sources: What You Should Know About Your Retirement Plan. U.S. Department of Labor, Employees Benefits Security Administration. <a href="http://www.dol.gov/ebsa">www.dol.gov/ebsa</a> .		



compensate for inflationary erosion of purchasing power. Most public DB plans have a vesting period, which means the employee must work for a specified number of years before he or she becomes eligible for any retirement benefit. If the employee chooses to retire before the designated retirement age, the employee may only be allowed to remove their portion of the contribution, which leaves the employer contribution remaining in the pension fund. When available, participation in the DB plans is compulsory for most public employees.

A defined benefit (DB) plan is funded through three sources: employee contributions, investment earnings and employer contributions. The DB plan puts the risk on the employer (taxpayer), who must ensure that the combination of annual contributions and return on accumulated system assets generate adequate holdings to pay out benefits at the promised level and throughout the lifetime of the retiree. Therefore, investment options and decisions are up to the employer to determine. In a DB pension system, the system can manage the risk of longevity by planning to make pension payments for the average number of years each employee who becomes vested and reaches retirement will collect. Some covered will leave employment prior to vesting, which means his or her contributed funds must be returned but the government's contributions will remain in the system to subsidize the government's required future contributions. Some retirees will collect retirement income for many years, while others will collect for fewer years. An individual saving for his or her own retirement runs the risk of living longer than their finances – or saving for many years and dying before they use their retirement funds.

DB plans offer the advantage of having their investments professionally managed while maintaining a low overhead. The participants in DB plans do not have to try and research investment options, or assume the risk of making one poor investment choice that will eat away

their principle. Public pension systems also offer low overhead in terms of this service, as little as 0.1 percent of assets held for systems with more than 10,000 employees (Hustead, 2009).

## **2.2 Defined Benefit Plans**

In contrast to defined benefit plans, **defined contribution plans** make no particular promises about the adequacy of retirement income. Rather, the employer commits to contributing a specified amount or percentage of salary on behalf of the employee. The employee often matches the employer's contribution by contributing a share of salary. Although employers may or may not manage the defined contribution plan, a key feature of this retirement funding approach is that once money is contributed to an employee's retirement account, the employee owns the asset. Should the employee leave the jurisdiction of employment, assets are "portable," which means they may be taken to the next job location or paid out to the employee. Although portability is a significant strength of this retirement funding approach, its benefits may be offset by the necessity of the employee assuming all risks. Governments participating in defined contribution plans have no financial responsibility to employees once the required contribution has been made. Investment losses are borne by the employee and may jeopardize retirement security. As a consequence, employers often place restrictions on investment options and withdrawals. In addition, defined contribution plans typically serve as supplements to social security, not replacements.

Although DC plans have proliferated as the dominant retirement plan offered by private sector employers, some retirement experts are concerned that they offer too little security to retirees, possibly requiring twice the contributions that most retirees currently make due to unknown life expectancy issues (Waring, 2009). Employees take the burden of ensuring that their investments grow and produce enough to support them and their families during retirement.

Although control over their own funds sounds empowering, employees do not always have the expertise or resources to maximize their investment returns. This makes for an uneven playing field among public employees. In addition, the freedom to withdraw funds from the account early without penalty is also a burden, because some employees may take money out too early, therefore not having enough to endure their retirement financially.

Defined contribution (DC) plans (referred to as a 401k plan in the private sector) are financed through contributions from employee, investment earnings, and in some cases, contributions from the employer. Typically, employees have input as to how much and in what manner to invest their own funds. The “defined contribution” piece refers to the number of dollars that the state commits to investing into the employee’s account; normally, employers match the employees’ investments up to a certain percentage of their salary. For example, the employer may agree to match all employee investments at 50 percent, up to 6 percent of his/her salary. If an employee contributes 4 percent of his/her salary, the employer will match 2 percent, for a total contribution equivalent to 6 percent of his/her salary. At an employee contribution rate of 6 percent, the employer would match the contribution with 3 percent; however, since the employer maxes the match at 50 percent of 6 percent, the employer contribution will not increase above 3 percent, even if the employee chooses to contribute 8 or 10 percent of his/her salary.

Typically, the plan is administered by a third party financial management entity, and employees have full access to choose how their funds are invested, within the boundaries of funds offered for investment at that firm. At any given time, the DC account will reflect its current market value, based on what has been invested to date. In other words, at any given time the account will reflect the value that the funds would sell for today. Employees may be able to borrow from the invested funds before retirement age, but will only have access to the funds for

which they are vested; vesting occurs after the employee has been a part of the organization for a certain length of time and is at the discretion of the State. For example, an employee may be fully vested after five years of employment, but could become 20 percent vested for each year of employment leading up to the final fifth year. In this example, an employee leaving after two years would be able to take all the funds that resulted on account of his/her contributions, but only 40 percent of the worth that resulted from the State's contribution, whereas an employee leaving after five years would own the entire fund.

### **2.3 Changing Between Plan Types**

Some states are considering changing from defined benefit to defined contribution plans. The Research Director of the National Association of State Retirement Administrators suggests that "it would be wiser for states to ask employees to contribute more toward underfunded plans than to switch to 401(k)-type plans" (Greenhouse, 2011). "Employee contributions along with investment returns make up the majority of public pension fund revenues" and therefore should be carefully considered before being removed to save government dollars (NCSL, 2011). In addition to keeping state employment an attractive option for citizens, there are other reasons that DB plan pensions may be in the best interest of the State. The National Conference for State Legislatures (NCSL) released a fact sheet on state and local pensions, which included the argument that "pension dollars help the economy in every jurisdiction," further explaining the point that reducing these benefits could have the unintended consequence of actually hurting the economy across states (NCSL, 2011). In other words, pensions are distributed to people throughout the State, providing income and fueling the economy across urban and rural boundaries. Although switching plans may gain the State liquid funds in the near-term, the long-term impact may mean needed investment in the failing economy further down the road.

As state employers have begun to make the shift towards DC plans—setup much like 401k systems in the private sector—public employees have not taken the change lightly. Most recently, governors in Ohio and Wisconsin have been “engaged in bitter showdowns with public-employee unions over wages, pensions and collective bargaining rights” (Greenhouse, 2011). Despite the battles, several states have made at least a partial change-over to a DC model, including Alaska, Colorado, Georgia, Michigan, Ohio and Utah. Usually, an employee is covered by social security and then the employee makes contributions to a segregated retirement fund and many employers will match the contribution up to a certain percentage. Many states offer an optional DC plan known as a 457(b) plan that allows employees to make unmatched, but pretax, payroll deductions. Employees covered by a DB plan may elect to supplement their DB pension with a 457(b) plan.

While moving to a DC plan may solve future funding issues, the switch-over will still not address current unfunded liabilities. “As contributions move to individual investment accounts, less money goes into the traditional plan to help finance pensions promised to other workers,” which puts states in a catch twenty-two: caught between the promise of a better long-term plan and the more immediate needs of those already committed to the old system (Greenhouse, 2011). Another way to look at this issue is that instead of everyone paying into the same pot that then is used to dole out the retirement benefits for the elder generation, DC plans setup pots for individual employees. By shifting the system so that the newer workers each setup their own fund, how will states now foot the bill for the near-term payout obligations for the elder generation in the old system? Again, a shift towards the option that may put cash in the hands of the government in the short-term, may also be the very option that hurts Maine’s financial system in the long-term.

In addition to the argument that reduced benefits could create an unintended brain drain from government jobs, Teresa Ghilarducci, the Chair of Economic Policy Analysis at the New School for Social Research, argues that 401k-like systems attract “risk seekers and high turnover workers” and, because they mirror the market, provide the wrong incentives for spending during economic booms, and conversely saving during downturns (Ghilarducci, 2011). Obviously, there are similar arguments that could be made in the opposite direction as to what type of workers want control over their own retirement investments etc., but this is just an example of the type of change in workers that a switch in benefits programming could bring.

### III. A CLOSER LOOK AT DEFINED CONTRIBUTION PLANS <sup>3</sup>

Public employees are accustomed to traditional defined benefit (DB) plans, which comprise the majority of state pension plans. In 2010, all but five states offered DB pension plans to state employees (Snell, 2010).

#### 3.1 Annual Required Contribution

Each year, an annual contribution is determined that is sufficient to cover the retirement benefits promised to current workers. This currently accruing amount is referred to as the “normal cost” of the system. Accounting standards requiring disclosure of any unfunded liabilities for pensions have pushed state and local governments to pre-fund retirement benefits, rather than pay for the benefits as retirees become eligible for them (a common practice through the early 1980s.) If states have not made adequate contributions in the past, or if assets do not appreciate at the expected rate of return, then the state is liable for making up the difference and eliminating the **unfunded actuarial liability** (UAL). When a plan is not fully funded, an additional employer contribution is required to reduce the amount of the “unfunded liability.”

- The total annual amount that must be contributed, which is called the **Annual Required Contribution (ARC)**, is the sum of current or “normal” costs plus catch up on any unfunded liability.

#### 3.2 Employee and Employer Contributions

Each employee’s annual contribution to a defined benefit pension system is set at a percentage of their salary. In contrast, the employer’s annual contribution is the amount needed to cover the normal cost of promised benefits less the employees’ contributions. The portion of the annual contribution necessary to support the benefit level promised to retirees—the normal

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<sup>3</sup> This section was researched and written by Morgan Beschle & Tim Feeley.

cost— is determined through actuarial methods. Factors that determine a government's contribution level include the expected rate of investment return, salary increases (inflation and merit), the projected impact of inflation on cost of living increases for retirees, ages of plan participants, the number of employees who will become vested, the number of years vested employees will work (and earn benefits), the numbers of years during which plan participants will receive retirement income, age at retirement and rate of disability for members. The number of assumptions required may make controversial the contribution amount determined necessary. As assumptions change, the accruing liability may increase or decrease.

An **earnings forecast** is used to estimate how much the average investment will earn in the future marketplace. Investment returns are known as the **discount rate** because they essentially offset the amount that the employer and/or employee must contribute to cover the remainder of the ARC. Most public pension systems assume an annual rate of return of 8 percent (Alicia H. Munnell, 2010). This has been seen as actuarially sound practice, as it reflects the risk assumed in the investment portfolio. However, as LaPlante and Honadle (2011) point out, many practices viewed as sound prior to the Great Recession have been shown to have exacerbated fiscal problems associated with the economic downturn. The expected return on investment has come under scrutiny; some economists suggest that the rate selected be more conservative to compensate for the impact on investments of economic upswings and downfalls. Stateline published an article about pension fund losses and gains: "A California-based investment advisor, reports a 13.09 percent median return among public plans with more than \$1 billion in assets for fiscal 2010, compared to an 18.76 percent loss in fiscal 2009" (Fehr, 2010, p. 1). The article notes that although the downturn caused some under-funding of pension plans,



the problem of underfunding occurred before the downturn and is compounded as the Baby Boomers begin to retire.

At a given point in time, the accumulated holdings of a pension system have a value. The value fluctuates daily as market forces influence the value of investments. The difference between the value of system assets and benefits due to prior and current employees accrued to date is called the **Unfunded Actuarial Liability** (UAL). The “funding ratio” of a pension system is arrived at by dividing the value of its assets by the value of its obligations. If a state has assets of \$15 million, for example, but has actuarial liabilities of \$20 million, they have a funding ratio of 0.75 or 75%. In contrast, if a state has assets equal to actuarially determined liabilities, the funding ratio is 100% of what is known as “fully funded.”

Unfunded liabilities have become a hot issue as a consequence of recession-induced sharp decreases in funding ratios. Although pension liabilities have always been considered in bond ratings, recent news reports stating that Moody’s Investor Services will “begin” to consider funding status in credit ratings has escalated anxiety. A recent article: “Moody’s Begins Treating Pension Liabilities like Bond Debt” outlines California’s decision to add pensions to bond debt, due to “weaker than expected investment results” (Mendel, 2011, p. 1).

As stated, the funding ratio of a pension system is simply a matter of calculating the amount of assets in the pension trust fund and the expected growth of the investments and the amount of the obligations that are expected to be placed on it. However, many factors go into the calculation of liabilities (see discussion of actuarial methods for determining annual contribution requirements.) Employee contributions, employer contributions, and most importantly, investment earnings affect the UAL (From MePERS, Costs Report, Feb 2011).

### **3.3. Unfunded Liabilities: A Closer Look at Origins and Issues**

Much of the sudden attention on unfunded liabilities has been driven by the major losses in investment earnings over the course of the recent Great Recession. Depending on how the benefit plan is setup, states take the contribution dollars of their employees and invest them into the stock market. Of course, depending on how the stock market is performing at any given time, the earnings on these investments may rise or fall. Still, LaPlante and Honadle conjecture that despite these losses, the pattern of investment over the last few decades has been impressive, in terms of how much was invested and the rate of return. It could be argued that the unfunded liabilities are not driven simply by the acute loss of investment earnings in the late “eighties,” but are, instead, a consequence of other confluent factors including a growing retiree population, shrinking workforce, increasing life expectancy and irresponsible return projections. For many years public pensions were funded on a pay-as-you-go basis, but as the public workforce expanded in the post World War Two era, retirement systems designed to manage funds and invest assets began to grow. By pre-funding retirees’ pensions, governments were better able to afford benefit levels by allowing them to be paid for by investments overtime. In 1994 the Governmental Accounting Standards Board (GASB) issued new standards for accounting for DB pension plans. The new framework for standards, first issued in papers numbered 25 and 27, determined that state and local governments should disclose the value of the assets set aside for pension benefits and the obligations that have been actuarially determined to be placed upon them (Government Actuarial Standards Board, 1994). While GASB has no legal authority or way to compel compliance, they are the recognized body that establishes common standards and some states do have statutes that require compliance with GASB standards (GAO, 2008).

The recent yawning gap of public retirement systems away from 100 percent funding has led many commentators to suggest that governments should follow the private sector in ending or reducing access to DB plans as well. There are, however, very large differences between a private sector businesses and the public sector (GASB, 2006). The private sector operates by selling a good or service and delivering a profit to equity holders, while government provides services to enhance the well-being of its citizens. A private business depends on revenue through the voluntary purchase of its good or service, while the public sector is financed through involuntary collection of taxes and fees. If demand for a good or service evaporates, the business could quickly disappear, while the disappearance of state government is unlikely despite its shortcomings. This is a simple but hugely important factor when considering how much weight to place on fully funding a pension system. Recently, the Governmental Accounting Standards Board proposed a revision to the way pension liabilities are calculated, which would increase the required annual contribution of state governments, in an effort to better align states with the U.S. Government Accountability Office's (GAO) recommendation that public pensions are funded by at least 80 percent (Kim & Kerrigan, 2010).

Private sector accounting standards have demanded that pension systems be fully funded because businesses can go bankrupt or cease operations. The long-term nature of both a pension system UAL and the longevity of public entities permit and even demand different standards than used in the private sector. While current market conditions have eroded the investment gains for pension systems considerably, many still have the assets available to continue making payments for years to come. Even with no new contributions, it is estimated that state pension plans could pay out benefits for decades before going insolvent. The General Accounting Office has considered public pension funds that are at least 80 percent funded to be adequately funded

(GAO, 2008). The central question about funding ratios is whether or not the UAL is being retired in a way that is actuarially sound and does not cause the plan sponsor undue fiscal stress.

### ***The Impact of Trends on System Sufficiency***

In the introduction to a recent journal symposium entitled: “Beyond the Storm: Surmounting Challenges of the New Public Finance,” Josephine LaPlante and Beth Honadle address the under-funding of retirement benefits, citing not only pensions but also other benefits, such as health insurance, that are at risk (LaPlante & Honadle, 2011). State liabilities include financial commitments made to state employees; these commitments are comprised of retirement benefits that eventually become the lifeblood of retired state workers. State employees consider their retirement benefits as part of their lifelong financial plans. On the surface, it may seem like a simple task for states to estimate the amount of liabilities and save enough to reach the mark; however, this estimation process hinges on a giant game of probability, including steps such as predicting when each employee will retire, how much he/she will make by the time he/she retires and how much the invested funds will grow between now and the payout date, among others. The woes of states’ unfunded liabilities do not end at retirement pensions, though, because in addition to pension liabilities, there is a larger issue of unfunded health insurance payments looming, one that is even more difficult to project due to the uncertainty around health care costs in the coming decades.

The retirement of the baby boomer generation and increasing longevity are causing increases in the levels and durations of pension and health insurance payouts, which will place unprecedented and in some cases unanticipated pressure on already-stressed systems. Projections carried over from the 1980s will therefore need to be reassessed based on the additional years that the average retiree will need to be supported. Baby Boomers retiring with

higher salaries will require higher payouts, while what were robust employee contributions will be replaced with lower payments, due to incoming employees with lower salaries. Take, for example, when an employee contributing 10 percent of a \$65,000 salary (\$6,500 per year) is replaced by a worker contributing 5 percent of a \$35,000 salary (\$1,750 per year). The pension fund will take a hit of \$4,750 per year, not to mention the additional pressure put on the system by the now-retired worker collecting a hearty pension from the system. With lower contributions into the fund, it could become more difficult for the State to support the retired population with monthly payouts. In addition, LaPlante and Honadle point out that the same trends apply to the Federal government, which may impact the Federal government's ability to aid the states during these difficult times (LaPlante & Honadle, 2011). A decrease in employee contributions combined with a reduction in federal aid could produce a far more difficult financial situation.

### **3.4 Social Security Coverage and Required Contributions to Defined Benefit Plans**

Public sector plans may be exempt from Social Security if they are deemed to meet certain criteria (IRS, 1991). So-called "safe harbor" plans must meet certain minimum requirements for how salaries are defined, how benefit accrual percentages are set and how benefits are accrued. The benefits must be in the form of a lifetime annuity. Any changes to a system that may erode benefits must be approved by the Internal Revenue Service. If the state is denied "safe harbor" status is required to participate in the Social Security System (MePERS, 2011). Participants in the Maine Teachers and State Employees Retirement System are not covered by Social Security.

When public sector workers who are covered by a public DB pension do not participate in the Social Security system, the public sector defined benefit plan serves as a substitute for social security retirement income security rather than as a supplement, the norm in most states

and local governments. Public employees who receive retirement income from an approved pension plan currently face a reduction in the amount of social security benefits they otherwise would receive due to earnings from employment in covered positions.

When a state or local government does not participate in social security, public employees do not earn credits toward social security eligibility for time worked. When a state contemplates replacing a defined benefit pension plan to social security, whether an employee may collect social security at retirement and how much they will collect is constrained by the lack of participation credits earned toward social security. Hence, this is no easy change.

When a state has an approved substitute retirement income program, neither the public employees nor the employing state or local jurisdiction contribute towards social security, although they do contribute toward Medicare coverage. The amounts that would need to be contributed to social security and Medicare rates are shown in Table 2.

<b>Table 2: Social Security and Medicare Tax Rates, 2010 and 2011</b>		
<b>Employment Tax Type</b>	<b>2010</b>	<b>2011</b>
<b>Social Security</b>		
Employee	6.2% on <= \$106,800	4.2% on earnings <=\$106,800
Employer	6.2% on <= \$106,800	4.2% on earnings <=\$106,800
<b>MEDICARE</b>		
Employee	1.45% on All Earnings	1.45% on All Earnings
Employer	1.45% on All Earnings	1.45% on All Earnings

In states that use their retirement system as a substitute for social security, the percentage of payroll contributed by the employer annually to cover promised benefits accruing to current employees tends to exceed the employer share of social security. In addition, the contribution rate also tends to be higher than what is seen in states where the defined benefit plan is intended to serve as a supplement only to social security retirement income. In Maine, the actuarially determined normal cost of the pension system requires a contribution equal to 13.15 percent of payroll. Currently, the employee pays 7.65 percent of salary, which is above the 6.2% previously required for social security and approaching twice the new, lower contribution of 4.2%. In contrast, the State of Maine contributes only 5.5% of salary of current state workers and teachers. Retirement system records show a higher rate of contribution by the State, but this amount reflects the normal cost contribution plus additional funding to reduce the large unfunded liability.

Abandoning the Maine state retirement system altogether and using social security in its place would have the following effects:

- (1) Employee contribution rates would decline from 7.65% to 4.2%.
- (2) State contributions for current state workers and teachers would decline from 5.5% to 4.2%. (There would have been an increase to 6.2% prior to 2011.)
- (3) The State would remain fully responsible for paying down the unfunded liability of the retirement system, which currently costs substantially more than the annual contribution made on behalf of current employees.
- (4) State workers and teachers nearing retiring age would not be able to accrue adequate “credits” (years of contributions to social security) to gain eligibility; if eligibility was

gained, the amount of social security would be reduced by the smaller lifetime amount paid into the system.

### **3.5 Employee Benefit Protections**

Benefits accrued in a DB plan have been found in most states to be protected by the state constitution or by the body of contract and property rights law. It has been found in many cases that if a state promises a certain benefit, it cannot diminish that benefit for current vested workers or current retirees. This is important to consider when looking at altering benefits in order to change the cost structure in states. The constraints of this reality mean that many reform efforts may only apply to prospective employees and those not currently vested (Monahan, 2010). Therefore efforts to cut current costs are also limited in effect.



#### **IV. A Comparative Perspective on Features of Maine's State Employees' and Teachers' Retirement System<sup>4</sup>**

Although this issue applies to the country at large, it is important to understand Maine's particular situation as an individual state. A recent report entitled: "Reinventing Maine Government," claims that the state of Maine currently owes "\$4.4 billion for unpaid obligations for public employee pension and health care plans" (Caron & Osborne, 2010, p. 26). The state pension plans are unique in that they are guaranteed regardless of the investment success or economic state; this type of plan is often referred to as a DB plan. In other words, 100 percent of the investment risk is put on the State, instead of sharing that burden with the employee. In addition, Maine "pays 100 percent of its retirees' health insurance and 45 percent of retired teachers' health insurance" (Caron & Osborne, 2010, p. 27). It is important to consider Maine's unique liabilities when determining action plans, as guaranteed benefits in both pension output and health benefits put more pressure on the system to produce. The report suggests some major changes, including automatically enrolling all employees in a DC plan that puts the risk on the employee and reduces benefits for early-retirees (Caron & Osborne, 2010). However, as the discussion in the previous section underscored, there are pros and cons to each type of retirement plan.

The State of Maine differs from many states facing UALs. The State of Maine has a 1997 constitutional amendment mandating that the UAL in the pension system be retired by 2028 (31 years from the ratification of the constitutional amendment) and that any new costs be paid for immediately. If the costs are due to "experience loss", or losses on investments from market changes, the state has to retire those losses in 10 years (Constitution of Maine, pp. Article IX,

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<sup>4</sup> This section was researched and written by Morgan Beschle. Morgan Beschle compiled the comparative system data and characteristics and analyzed similarities and differences from Maine. Tim Feeley assisted by providing information on the unfunded liability and Constitutional provisions.

Section 18-A). The State of Maine, therefore, has a slightly different calculation in determining the amortization schedule of the UAL from other states.

Retiring the UAL has garnered added attention in the current budget debate because of the market losses from the Great Recession and the constitutional provision to make up for those market losses in ten years, whereas most states may amortize the market losses over a longer period. For Maine, these costs are increasing in the FY2012-13 state budget biennium to \$916M (\$448M for FY 2012 and \$468M for FY 2013). This compares to total biennial costs for FY 2010-2011 of \$629M.

#### **4.1 Structural Features**

The structural issues in Maine's state retirement system are outlined in Table 3. Most state systems cover state employees and teachers, but systems may be separate or combined. Although most state employees receive social security benefits in addition to their pension plan, there are several states in which public employees do not receive social security coverage, depending on the fund: Alaska, California, Connecticut, Illinois, Kentucky, Louisiana, Maine, Massachusetts, Missouri, Nevada, Ohio and Texas. There are some serious implications of employees not receiving social security benefits, as the entire burden of retirement benefits is now on the state governments to deliver.

As shown in Table 3, states in which employees do not receive social security benefits generally have higher contribution rates to make up for the increased pressure on the pension fund to supply 100 percent of employees' retirement benefits. The median employee contribution rates amongst states in which employees receive social security benefits is around 5 percent, while states in which employees do not receive social security benefits is around 8 percent. Among states in which employees do not receive social security benefits, Nevada

requires the highest employee contribution rate of 11.25 percent, whereas Maine is below the median at 7.65 percent. Being a state with employees that do not receive social security, there is more pressure on Maine's government to provide retirement benefits; it could be argued that a lower employee contribution rate is contributing to the struggle to close the gap of unfunded liabilities. At one time, states' participation in the Social Security program was elective, but more recently it has become required (Schmidt, 2010).

**Table 3: Comparison of State-Local Retirement Systems' Employee and Employer Contribution Requirements by Type and Funded Status, 2008**

State	Fund Name	Employee Coverage <sup>5</sup>	Social Security Coverage?	Employee Contribution	Employer Normal Cost Plus Contribution Toward Unfunded Liability (if relevant)	Funded Ratio 2008
Alabama	ERS	S, L	Yes	5.00 percent	4.90 percent	75.9 percent
Alabama	TRS	T	Yes	5.00 percent	6.39 percent	77.6 percent
Alaska	PERS	S, L	No	8.00 percent	5.00 percent <sup>6</sup>	N.D.
Alaska	TRS	T	No	8.00 percent	7.00 percent <sup>7</sup>	N.D.
Arizona	SRS	S, L, T	Yes	9.00 percent	6.45 percent	82.2 percent
Arkansas	PERS	S, L	Yes	5.00 percent	12.54 percent	90.0 percent
Arkansas	TRS	T	Yes	6.00 percent	12.87 percent	84.9 percent
California	PERS	S, L	Yes	5.00 percent or 6.00 percent	10.55 percent	87.2 percent
California	TRS	T	No	8.00 percent	8.25 percent	89.0 percent
Colorado	PERA	S, L, T	No	8.00 percent	10.15 percent	67.9 percent
Connecticut	SERS	S	Yes	2.00 percent	4.70 percent	51.9 percent
Connecticut	TRS	T	No	6.00 percent	4.40 percent	70.0 percent
Delaware	SEPP	S, T	Yes	3.00 percent above \$6,000	6.85 percent	103.1 percent
Florida	FRS	S, L, T	Yes	Non-contributory	8.69 percent	105.4 percent
Georgia	ERS	S	Yes	1.25 percent	6.80 percent	89.4 percent

<sup>5</sup> S = State, L = Local, T = Teachers

<sup>6</sup> Alaska PERS and TRS converted to a defined contribution plan on July 1, 2006

<sup>7</sup> Alaska PERS and TRS converted to a defined contribution plan on July 1, 2006

Georgia	TRS	T	Yes	5.00 percent	7.96 percent	94.7 percent
Hawaii	ERS	S, L, T	Yes	6.00 percent	5.85 percent	67.5 percent
Idaho	PERS	S, L, T	Yes	6.23 percent	10.39 percent	93.3 percent
Illinois	SERS	S	Yes	4.00 percent	16.56 percent	46.1 percent
Illinois	TRS	T	No	9.40 percent	9.15 percent	56.0 percent
Illinois	MRF	L	Yes	4.50 percent	7.58 percent	84.3 percent
Indiana	PERF	S, L	Yes	3.00 percent	6.26 percent	98.2 percent
Indiana	TRF	T	Yes	3.00 percent	4.97 percent	48.2 percent
Iowa	PERS	S, L, T	Yes	3.90 percent	6.05 percent	89.1 percent
Kansas	PERS	S, L, T	Yes	4.00 percent	7.39 percent	70.8 percent
Kentucky	ERS	S	Yes	5.00 percent	3.55 percent	54.2 percent
Kentucky	CERS	L	Yes	5.00 percent	3.85 percent	77.1 percent
Kentucky	TRS	T	No	9.86 percent	9.86 percent	68.2 percent
Louisiana	SERS	S	No	7.80 percent	7.31 percent	67.0 percent
Louisiana	TRSL	T	No	8.00 percent	15.5 percent min	70.2 percent
Maine	PERS	S, L, T	No	7.65 percent	17.01 percent	79.7 percent
Maryland	SRPS	S, L, T	Yes	2.00 percent	8.86 percent	78.6 percent
Massachusetts	SERS	S	No	9.00 percent	3.80 percent	71.6 percent
Massachusetts	TRS	T	No	11.00 percent	1.96 percent	73.9 percent
Michigan	SERS	S	Yes	Non-contributory	8.30 percent	71.1 percent
Michigan	MERS	L	Yes	Varies by plan	Varies by plan	77.7 percent
Michigan	PSERS	T	Yes	3.00 percent to 4.30 percent	5.60 percent	71.5 percent
Minnesota	MSRS	S	Yes	4.50 percent	4.50 percent	90.2 percent
Minnesota	PERA	L	Yes	6.00 percent	6.50 percent	73.6 percent
Minnesota	TRA	T	Yes	5.50 percent	5.50 percent	82.0 percent
Mississippi	PERS	S, L, T	Yes	7.25 percent	11.85 percent	72.9 percent
Missouri	SERS	S	Yes	Non-contributory	12.75 percent	85.9 percent
Missouri	LAGERS	L	Yes	0 percent-4.00 percent	Varies by plan	97.5 percent
Missouri	PSRS	T	No	10.86 percent	10.86 percent	83.4 percent
Montana	PERS	S, L	Yes	6.90 percent	6.94 percent	90.0 percent
Montana	TRS	T	Yes	7.15 percent	7.47 percent	79.9 percent

Nebraska	SEPP <sup>8</sup>	S	Yes	4.80 percent	156 percent of member contribution	103.4 percent
Nebraska	CEPP <sup>9</sup>	L	Yes	4.50 percent	150 percent of member contribution	108.1 percent
Nebraska	SPP	T	Yes	7.28 percent	101 percent of member contribution	90.6 percent
Nevada	PERS	S, L, T	No	11.25 percent	11.25 percent	76.2 percent
New Hampshire	NHRS	S, L, T	Yes	5.00 percent	4.67 percent	67.8 percent
New Jersey	PERS	S, L	Yes	5.50 percent	4.80 percent state; 3.44 percent local	77.4 percent
New Jersey	TPAF	T	Yes	5.50 percent	1.8 billion (total varies)	72.1 percent
New Mexico	PERA	S, L	Yes	7.42 percent	16.59 percent	92.0 percent
New Mexico	ERA	T	Yes	7.90 percent	5.66 percent	71.5 percent
New York	ERS	S, L	Yes	3.00 percent	9.60 percent <sup>10</sup>	105.8 percent
New York	TRS	T	Yes	3.00 percent	7.63 percent	104.2 percent
North Carolina	TSERS	S, T	Yes	6.00 percent	3.36 percent	104.7 percent
North Carolina	LGERS	L	Yes	6.00 percent	4.80 percent	99.5 percent
North Dakota	PERS	S, L	Yes	4.00 percent	4.12 percent	92.6 percent
North Dakota	TRF	T	Yes	7.75 percent	8.25 percent	81.9 percent
Ohio	PERS	S, L	No	10.00 percent	14.00 percent	96.3 percent
Ohio	STRS	T	No	10.00 percent	14.00 percent	79.1 percent
Oklahoma	PERS	S, L	Yes	3.00 percent to 3.50 percent	12.46 percent	73.0 percent
Oklahoma	TRS	T	Yes	7.00 percent	9.00 percent	50.5 percent
Oregon	PERS	S, L, T	Yes	6.00 percent	7.50 percent	112.2 percent
Pennsylvania	SERS	S	Yes	6.25 percent	9.51 percent	89.0 percent
Pennsylvania	PSERS	T	Yes	7.32 percent (average)	4.00 percent	91.2 percent
Rhode Island	ERS	S, T	Yes	8.75 percent (9.50 percent teachers)	1.64 percent (2.33 percent teachers)	57.5 percent
South Carolina	SCRS	S, L, T	Yes	6.50 percent	3.51 percent	69.7 percent
South Dakota	SRS	S, L, T	Yes	6.00 percent	6.00 percent	97.2 percent
Tennessee	CRS	S, L, T	Yes	Non-contributory	13.58 percent	96.2 percent

<sup>8</sup> Converted to individual cash balance plans from defined contribution plans

<sup>9</sup> Converted to individual cash balance plans from defined contribution plan

<sup>10</sup> Average rate for 2008

Texas	ERS	S	Yes	6.00 percent	6.45 percent	92.6 percent
Texas	TRS	T	No	6.40 percent	6.58 percent	86.2 percent
Texas	MRS	L	Yes	5.00 percent, 6.00 percent, or 7.00 percent	5.00 percent to 14.00 percent	74.4 percent
Utah	SRS	S, L, T	Yes	Non-contributory	11.62 percent to 14.22 percent	84.2 percent
Vermont	SRS	S	Yes	5.10 percent	5.93 percent	94.1 percent
Vermont	TRS	T	Yes	3.40 percent	3.54 percent	80.9 percent
Virginia	SRS	S, L, T	Yes	5.00 percent	6.15 percent	82.3 percent
Washington	PERS	S, L	Yes	4.61 percent; non-contributory	4.72 percent	119.9 percent
Washington	TRS	T	Yes	4.93 percent; non-contributory	5.70 percent	130.4 percent
West Virginia	PERS	S, L	Yes	4.50 percent	10.50 percent	84.2 percent
West Virginia	TRS	T	Yes	6.00 percent	7.50 percent	50.0 percent
Wyoming	WRS	S, L, T	Yes	5.57 percent	5.68 percent	78.6 percent
Milwaukee	City	L	Yes	5.50 percent	11.22 percent (due in 2010)	99.1 percent
Milwaukee	County	L	Yes	Non-contributory	\$34,981,095	95.7 percent
Wisconsin	WRS	S, L, T	Yes	5.00 percent	4.80 percent	99.7 percent
Sources: 2008 Comparative Study of Major Public Employee Retirement Systems prepared by Daniel Schmidt, Wisconsin Legislative Council in December 2009 (Revised in May 2010).						

The employer contribution rates for retirement systems shown on Table 3 include contributions toward the unfunded liability in addition to the normal cost. The aggregation of these two types of contributions make comparisons difficult. In addition, in some states the contribution percentage is applicable only up to a certain specified earning level. Using this comparative data to benchmark a state's potential contribution requires more detail than provided.

Also, it is important to keep in mind that Maine is one of only a small number of states that use their retirement systems to replace rather than supplement social security. State

**Table 4: Comparison of Pension Plan Features, State-Local Retirement Systems 2008**

State	Fund Name	Employee Coverage <sup>11</sup>	Social Security Coverage?	Normal Retirement (Employee Age/Years Employment)	Early Retirement (Age/Years)	Reduction for Early Retirement	Vesting Period
Alabama	ERS	S, L	Yes	60/10; any/25	None		10 years
Alabama	TRS	T	Yes	60/10; any/25	None		10 years
Alaska	PERS	S, L	No	59-1/2 <sup>12</sup>	None		5 years
Alaska	TRS	T	No	59-1/2 <sup>13</sup>	None		5 years
Arizona	SRS	S, L, T	Yes	65; 62/10; R80	50/5	Table	Immediate
Arkansas	PERS	S, L	Yes	65/5; any/28	55/5; any/25	6 percent per yr	5 years
Arkansas	TRS	T	Yes	60/5; any/28	Any/25	Lesser of 5 percent for each yr less than 28 yrs of service or 5 percent for each yr prior to age 60	5 years
California	PERS	S, L	Yes	55/5	50/5	Multiplier varies	5 years
California	TRS	T	No	60/5	55/5; 50/30	3 percent to 6 percent a yr	5 years
Colorado	PERA	S, L, T	No	65/5; 50/30; 55/R85; any/35	50/25; 55/20; 60/5	Table	5 years
Connecticut	SERS	S	Yes	62/10; 60/25	55/10	3 percent per yr	5 years
Connecticut	TRS	T	No	60/20; any/35	Any/25; 55/20; 60/10	3 percent per yr	10 years

<sup>11</sup> S = State, L = Local, T = Teachers<sup>12</sup> Defined contribution plan: taxes and penalties may apply if contributions are withdrawn prior to age 59-1/2<sup>13</sup> Defined contribution plan: taxes and penalties may apply if contributions are withdrawn prior to age 59-1/2

Delaware	SEPP	S, T	Yes	62/5; 60/15; any/30	55/15; any/25	2.4 percent per yr	5 years
Florida	FRS	S, L, T	Yes	62/6; any/30	Any/6	5 percent per yr	6 years
Georgia	ERS	S	Yes	65/10; any/30	60/10; any/25	7 percent per yr; max 35 percent	10 years
Georgia	TRS	T	Yes	60/10; any/30	Any/25	7 percent per yr	10 years
Hawaii	ERS	S, L, T	Yes	62/5; 55/30	55/20	5 percent per yr	5 years
Idaho	PERS	S, L, T	Yes	65/5; R90	55/5	3 percent per yr for 1st 5 yrs; 5.75 percent per yr thereafter	5 years
Illinois	SERS	S	Yes	60/8; R85	55/25	6 percent per yr	8 years
Illinois	TRS	T	No	62/5; 60/10; 55/35	55/20	6 percent per yr	5 years
Illinois	MRF	L	Yes	60/8; 55/35	55/8	3 percent per yr	8 years
Indiana	PERF	S, L	Yes	65/10; 60/15; 55/R85	50/15	Determined using "look up" table	10 years
Indiana	TRF	T	Yes	65/10; 60/15; 55/R85	50/15	5 percent per yr to 60; 1.2 percent per yr age 60 to 65	10 years
Iowa	PERS	S, L, T	Yes	65; 62/20; R88	55/4	3 percent per yr	4 years
Kansas	PERS	S, L, T	Yes	65/1; 62/10; R85	55/10	2.4 percent/7.20 percent per yr	10 years
Kentucky	ERS	S	Yes	65/4; any/27	55/5; any/25	5 percent/4 percent per yr	5 years
Kentucky	CERS	L	Yes	65/4; any/27	55/5; any/25	5 percent/4 percent per yr	5 years
Kentucky	TRS	T	No	60/5; any/27	55/5	5 percent per yr	5 years
Louisiana	SERS	S	No	60/10	Any/20	Determined using	10 years



						"look up" table	
Louisiana	TRSL	T	No	60/5; 55/25; any/30	Any/20	Multiplier varies	5 years
Maine	PERS	S, L, T	No	62/5	Any/25	6 percent a yr	5 years
Maryland	SRPS	S, L, T	Yes	60/5; any/30	Any/25	6 percent a yr; max 42 percent	5 years
Massachusetts	SERS	S	No	55/10; any/20	None		10 years
Massachusetts	TRS	T	No	55/10; any/20	None		10 years
Michigan	SERS	S	Yes	60/10; 55/30	55/15	6 percent a yr	10 years
Michigan	MERS	L	Yes	Varies by plan	Varies by plan	Varies by plan	6, 8, or 10 yrs
Michigan	PSERS	T	Yes	60/5; any/30	55/15	6 percent a yr	10 years
Minnesota	MSRS	S	Yes	62; 60/6; any/30; R90	55/3	Determined using "look up" table	3 years
Minnesota	PERA	L	Yes	65/1; any/30; R90	55/3	Determined using "look up" table	3 years
Minnesota	TRA	T	Yes	65/1; 62/30; any/30; R90	55/3	Determined using "look up" table	3 years
Mississippi	PERS	S, L, T	Yes	60/8; any/25	None		8 years
Missouri	SERS	S	Yes	65/5; 65/4 active; 62/5; 60/15; 48/R80	57/5; 55/10	6 percent a yr	5 years
Missouri	LAGERS	L	Yes	60/5; R80 option	55/5	6 percent a yr	5 years
Missouri	PSRS	T	No	60/5; R80; any/30	55/5; any/25	Determined using "look up" table	5 years

Montana	PERS	S, L	Yes	65/any; 60/5; any/30	50/5; any/25	Determined using "look up" table	5 years
Montana	TRS	T	Yes	60/5; any/25	50/5	6 percent; 3.6 percent a yr	5 years
Nebraska	SEPP	S	Yes	55		Money purchase	3 years
Nebraska	CEPP	L	Yes	55		Money purchase	3 years
Nebraska	SPP	T	Yes	65; 55/R85	60/5; any/35	3 percent a yr	5 years
Nevada	PERS	S, L, T	No	65/5; 60/10; any/30	Any/5	4 percent a yr	5 years
New Hampshire	NHRS	S, L, T	Yes	60/any	50/10; R70/20	1.5 percent; 3 percent; 4 percent; 6.67 percent a yr	10 years
New Jersey	PERS	S, L	Yes	62/any	Any/25	3 percent a yr	10 years
New Jersey	TPAF	T	Yes	60/any	Any/25	3 percent a yr	10 years
New Mexico	PERA	S, L	Yes	65/5 to 60/20; any/25	None		5 years
New Mexico	ERA	T	Yes	65/5; any/25; 60/R75	R75	Determined using "look up" table	5 years
New York	ERS	S, L	Yes	62/5; 55/30	55/5	6 percent/3 percent a yr	5 years
New York	TRS	T	Yes	62/5; 55/30	55/5	6 percent/3 percent a yr	5 years
North Carolina	TSERS	S, T	Yes	65/5; 60/25; any/30	60/5; 50/20	3 percent a yr	5 years
North Carolina	LGERS	L	Yes	65/5; 60/25; any/30	60/5; 50/20	3 percent a yr	5 years
North Dakota	PERS	S, L	Yes	65/any; R85	55/3	6 percent a yr	3 years
North Dakota	TRF	T	Yes	65/5; R90	55/5	6 percent a yr	5 years
Ohio	PERS	S, L	No	60/5; any/30	55/25	3 percent a yr	5 years

Ohio	STRS	T	No	65; any/30	60/5; 55/25	3 percent a yr	5 years
Oklahoma	PERS	S, L	Yes	62/6; R90	55/10	Determined using "look up" table	8 years
Oklahoma	TRS	T	Yes	62/5; R90	55/5; any 30	Determined using "look up" table	5 years
Oregon	PERS	S, L, T	Yes	65/any; 60/any; 58/30	55; any 30	Full actuarial reduction	5 years
Pennsylvania	SERS	S	Yes	60/3; any/35	Any/5	3 percent to 6 percent per yr average	5 years
Pennsylvania	PSERS	T	Yes	62; 60/30; any/35	55/25	3 percent per yr	5 years
Rhode Island	ERS	S, T	Yes	60/10; any/28	55/20	Determined using "look up" table	10 years
South Carolina	SCRS	S, L, T	Yes	65/any; any/28	60; 55/25	5 percent a yr for each yr under age 65; 4 percent a yr for each yr under age 28	5 years
South Dakota	SRS	S, L, T	Yes	65/3; 55/R85	55/3	Determined using "look up" table	3 years
Tennessee	CRS	S, L, T	Yes	60/5; any/30	55/10; any/25	4.8 percent per yr	5 years
Texas	ERS	S	Yes	60/5; R80	None		
Texas	TRS	T	No	65/5; 60/20; R80	55/5; any/30	Determined using "look up" table	5 years
Texas	MRS	L	Yes	60/5; 60/10; any/20 or 25 option	None		5 years
Utah	SRS	S, L, T	Yes	65/4; any/30	Any/25; 60/20; 62/10	3 percent a yr; full actuarial reduction for each yr before age 60	4 years
Vermont	SRS	S	Yes	62/any; any/30	55/5	6 percent per yr	5 years

Vermont	TRS	T	Yes	62/any; any/30	55/5	6 percent per yr	5 years
Virginia	SRS	S, L, T	Yes	65/5; 50/30	50/10; 55/5	6 percent; 4.8 percent per yr	5 years
Washington	PERS	S, L	Yes	65/5; 65/10	55/20; 55/10	3 percent a yr or table	5 yrs; 10 yrs
Washington	TRS	T	Yes	65/5; 65/10	55/20; 55/10	3 percent per yr or table	5 yrs; 10 yrs
West Virginia	PERS	S, L	Yes	60/5; 55/R80	55/10	Full actuarial reduction	5 years
West Virginia	TRS	T	Yes	60/5; 55/30; any/35	Any/30	Full actuarial reduction	5 years
Wisconsin: Milwaukee	City	L	Yes	60/any; 55/30	55/15	Determined using "look up" table	4 years
Wisconsin: Milwaukee	County	L	Yes	60/any; R75	55/15	5 percent per yr	5 years
Wisconsin	WRS	S, L, T	Yes	65/any; 57/30	55	Varies by length of service	Immediate
Wyoming	WRS	S, L, T	Yes	60/4; R85	50/4; any/25	5 percent per yr	4 years
Sources: 2008 Comparative Study of Major Public Employee Retirement Systems prepared by Daniel Schmidt, Wisconsin Legislative Council in December 2009 (Revised in May 2010).							

employees and teachers depend completely on state pensions and face offsets for spousal benefits. In contrast, two private sector employees would face no penalties for both having 401(k) plans and therefore would have more resources for potentially the same number of years of service and salary.

As shown in Table 4, normal retirement age varies by state. Normal retirement refers to the age at which an employee will be eligible for full retirement benefits (Schmidt, 2010, p.11). Some states require employees be a certain age and have served a certain number of years before being eligible for full retirement benefits. In Maine, employees are eligible for full retirement benefits at age 62, as long as they have at least five years of service. In addition, some plans offer early retirement, but with a penalty to the retirement benefit amount. In Maine, employees can retire early at any age, as long as they have dedicated 25 or more years of service. If employees retire early in Maine, their benefit is reduced by 6 percent per year (Schmidt, 2010). Although a 6 percent reduction is on the higher end when compared with other states, Maine offers such a young retirement age, that fewer employees should need to retire early and assume this reduction in benefits.

Social Security benefits also play a role in when an employee receives the full suite of retirement benefits. The earliest age at which a person can receive Social Security retirement benefits is 62 years, at which point the benefits are reduced to take the longer payout period into account (Schmidt, 2010). Employees that retire at age 65 are eligible for full Social Security benefits, although this age may increase over time with increasing longevity and health care advances. It is important to note that Maine offers full retirement at a young age when compared to the federal Social Security program. This feature places more pressure on the State of Maine's system, due to the greater potential number of years of benefits payout. Across the

**Table 5: Comparison of Actuarial Assumptions for State-Local Retirement Systems 2008**

State	Fund Name	Employee Coverage <sup>14</sup>	Social Security Coverage?	Normal Retirement (Age/Years)	Vesting Period	Actuarial Method	Interest Assumption <sup>15</sup>	Wage Inflation	Economic Spread
Alabama	ERS	S, L	Yes	60/10; any/25	10 years	Entry age	8.00 percent	4.50 percent	3.50 percent
Alabama	TRS	T	Yes	60/10; any/25	10 years	Entry age	8.00 percent	4.50 percent	3.50 percent
Alaska	PERS	S, L	No	59-1/2 <sup>16</sup>	5 years	Unit credit	N/A	N/A	N/A
Alaska	TRS	T	No	59-1/2 <sup>17</sup>	5 years	Unit credit	N/A	N/A	N/A
Arizona	SRS	S, L, T	Yes	65; 62/10; R80	Immediate	Unit credit	8.00 percent	4.25 percent	3.75 percent
Arkansas	PERS	S, L	Yes	65/5; any/28	5 years	Entry age	8.00 percent	4.00 percent	4.00 percent
Arkansas	TRS	T	Yes	60/5; any/28	5 years	Entry age	8.00 percent	4.00 percent	4.00 percent
California	PERS	S, L	Yes	55/5	5 years	Entry age	7.75 percent	3.00 percent	4.75 percent
California	TRS	T	No	60/5	5 years	Entry age	8.00 percent	3.25 percent	4.75 percent
Colorado	PERA	S, L, T	No	65/5; 50/30; 55/R85; any/35	5 years	Entry age	8.50 percent	3.75 percent	4.75 percent
Connecticut	SERS	S	Yes	62/10; 60/25	5 years	Unit credit	8.25 percent	4.00 percent	4.25 percent
Connecticut	TRS	T	No	60/20; any/35	10 years	Entry age	8.50 percent	4.00 percent	4.50 percent
Delaware	SEPP	S, T	Yes	62/5; 60/15; any/30	5 years	Entry age	8.00 percent	3.75 percent	4.25 percent

<sup>14</sup> S = State, L = Local, T = Teachers<sup>15</sup> N.D. = Not Defined<sup>16</sup> Defined contribution plan: taxes and penalties may apply if contributions are withdrawn prior to age 59-1/2<sup>17</sup> Defined contribution plan: taxes and penalties may apply if contributions are withdrawn prior to age 59-1/2

Florida	FRS	S, L, T	Yes	62/6; any/30	6 years	Entry age	7.75 percent	3.00 percent	4.75 percent
Georgia	ERS	S	Yes	65/10; any/30	10 years	Entry age	7.50 percent	3.75 percent	3.75 percent
Georgia	TRS	T	Yes	60/10; any/30	10 years	Entry age	7.50 percent	3.75 percent	3.75 percent
Hawaii	ERS	S, L, T	Yes	62/5; 55/30	5 years	Entry age	8.00 percent	4.00 percent	4.00 percent
Idaho	PERS	S, L, T	Yes	65/5; R90	5 years	Entry age	7.25 percent	4.50 percent	3.25 percent
Illinois	SERS	S	Yes	60/8; R85	8 years	Unit credit	8.50 percent	3.00 percent	5.50 percent
Illinois	TRS	T	No	62/5; 60/10; 55/35	5 years	Unit credit	8.50 percent	3.50 percent	5.00 percent
Illinois	MRF	L	Yes	60/8; 55/35	8 years	Entry age	7.50 percent	4.00 percent	3.50 percent
Indiana	PERF	S, L	Yes	65/10; 60/15; 55/R85	10 years	Entry age	7.25 percent	N.D.	N.D.
Indiana	TRF	T	Yes	65/10; 60/15; 55/R85	10 years	Entry age	7.50 percent	3.25 percent	4.25 percent
Iowa	PERS	S, L, T	Yes	65; 62/20; R88	4 years	Entry age	7.50 percent	4.00 percent	3.50 percent
Kansas	PERS	S, L, T	Yes	65/1; 62/10; R85	10 years	Entry age	8.00 percent	4.00 percent	4.00 percent
Kentucky	ERS	S	Yes	65/4; any/27	5 years	Entry age	7.75 percent	3.50 percent	4.25 percent
Kentucky	CERS	L	Yes	65/4; any/27	5 years	Entry age	7.75 percent	3.50 percent	4.25 percent
Kentucky	TRS	T	No	60/5; any/27	5 years	Unit credit	7.50 percent	4.00 percent	3.50 percent
Louisiana	SERS	S	No	60/10	10 years	Unit credit	8.25 percent	N.D.	N.D.
Louisiana	TRSL	T	No	60/5; 55/25; any/30	5 years	Unit credit	8.25 percent	3.20 percent	5.25 percent
Maine	PERS	S, L, T	No	62/5	5 years	Entry age	7.75 percent	4.50 percent	3.25 percent
Maryland	SRPS	S, L, T	Yes	60/5; any/30	5 years	Entry age	7.75 percent	3.50 percent	4.25 percent
Massachusetts	SERS	S	No	55/10; any/20	10 years	Entry age	8.25 percent	N.D.	N.D.
Massachusetts	TRS	T	No	55/10; any/20	10 years	Entry age	8.25 percent	N.D.	N.D.

Michigan	SERS	S	Yes	60/10; 55/30	10 years	Entry age	8.00 percent	3.50 percent	4.50 percent
Michigan	MERS	L	Yes	Varies by plan	6, 8, or 10 yrs	Entry age	8.00 percent	4.50 percent	3.50 percent
Michigan	PSERS	T	Yes	60/5; any/30	10 years	Entry age	8.00 percent	3.50 percent	4.50 percent
Minnesota	MSRS	S	Yes	62; 60/6; any/30; R90	3 years	Entry age	8.50 percent	4.50 percent	4.00 percent
Minnesota	PERA	L	Yes	65/1; any/30; R90	3 years	Entry age	8.50 percent	4.50 percent	4.00 percent
Minnesota	TRA	T	Yes	65/1; 62/30; any/30; R90	3 years	Entry age	8.50 percent	4.50 percent	4.00 percent
Mississippi	PERS	S, L, T	Yes	60/8; any/25	8 years	Entry age	8.00 percent	4.00 percent	4.00 percent
Missouri	SERS	S	Yes	65/5; 65/4 active; 62/5; 60/15; 48/R80	5 years	Entry age	8.50 percent	4.00 percent	4.50 percent
Missouri	LAGERS	L	Yes	60/5; R80 option	5 years	Entry age	7.50 percent	4.00 percent	3.50 percent
Missouri	PSRS	T	No	60/5; R80; any/30	5 years	Entry age	8.00 percent	3.25 percent	4.75 percent
Montana	PERS	S, L	Yes	65/any; 60/5; any/30	5 years	Entry age	8.00 percent	4.25 percent	3.75 percent
Montana	TRS	T	Yes	60/5; any/25	5 years	Entry age	7.75 percent	4.50 percent	3.25 percent
Nebraska	SEPP <sup>18</sup>	S	Yes	55	3 years	Entry age	7.75 percent	3.50 percent	4.10 percent
Nebraska	CEPP <sup>19</sup>	L	Yes	55	3 years	Entry age	7.75 percent	3.50 percent	4.10 percent
Nebraska	SPP	T	Yes	65; 55/R85	5 years	Entry age	8.00 percent	3.50 percent	4.50 percent
Nevada	PERS	S, L, T	No	65/5; 60/10; any/30	5 years	Entry age	8.00 percent	3.50 percent	4.50 percent
New Hampshire	NHRS	S, L, T	Yes	60/any	10 years	Entry age	8.50 percent	3.50 percent	5.00 percent
New Jersey	PERS	S, L	Yes	62/any	10 years	Unit credit	8.25 percent	4.00 percent	4.25 percent
New Jersey	TPAF	T	Yes	60/any	10 years	Unit credit	8.25 percent	4.00 percent	4.25 percent

<sup>18</sup> Converted to individual cash balance plans from defined contribution plans

<sup>19</sup> Converted to individual cash balance plans from defined contribution plan



New Mexico	PERA	S, L	Yes	65/5 to 60/20; any/25	5 years	Entry age	8.00 percent	4.00 percent	4.00 percent
New Mexico	ERA	T	Yes	65/5; any/25; 60/R75	5 years	Entry age	8.00 percent	3.00 percent	5.00 percent
New York	ERS	S, L	Yes	62/5; 55/30	5 years	Aggregate	8.00 percent	3.00 percent	5.00 percent
New York	TRS	T	Yes	62/5; 55/30	5 years	Aggregate	8.00 percent	3.00 percent	5.00 percent
North Carolina	TSERS	S, T	Yes	65/5; 60/25; any/30	5 years	Entry age	7.25 percent	N.D.	N.D.
North Carolina	LGERS	L	Yes	65/5; 60/25; any/30	5 years	Entry age	7.25 percent	N.D.	N.D.
North Dakota	PERS	S, L	Yes	65/any; R85	3 years	Entry age	8.00 percent	4.50 percent	3.50 percent
North Dakota	TRF	T	Yes	65/5; R90	5 years	Entry age	8.00 percent	3.00 percent	5.00 percent
Ohio	PERS	S, L	No	60/5; any/30	5 years	Entry age	8.00 percent	4.00 percent	4.00 percent
Ohio	STRS	T	No	65; any/30	5 years	Entry age	8.00 percent	3.00 percent	5.00 percent
Oklahoma	PERS	S, L	Yes	62/6; R90	8 years	Entry age	7.50 percent	3.00 percent	4.50 percent
Oklahoma	TRS	T	Yes	62/5; R90	5 years	Entry age	8.00 percent	3.00 percent	5.00 percent
Oregon	PERS	S, L, T	Yes	65/any; 60/any; 58/30	5 years	Unit credit	8.00 percent	2.75 percent	5.25 percent
Pennsylvania	SERS	S	Yes	60/3; any/35	5 years	Entry age	8.00 percent	3.30 percent	4.70 percent
Pennsylvania	PSERS	T	Yes	62; 60/30; any/35	5 years	Entry age	8.25 percent	3.25 percent	5.00 percent
Rhode Island	ERS	S, T	Yes	60/10; any/28	10 years	Entry age	8.25 percent	3.00 percent	5.25 percent
South Carolina	SCRS	S, L, T	Yes	65/any; any/28	5 years	Entry age	7.25 percent	3.00 percent	4.25 percent
South Dakota	SRS	S, L, T	Yes	65/3; 55/R85	3 years	Entry age	7.75 percent	N.D.	N.D.
Tennessee	CRS	S, L, T	Yes	60/5; any/30	5 years	Entry age-FIL <sup>20</sup>	7.50 percent	3.00 percent	4.50 percent
Texas	ERS	S	Yes	60/5; R80		Entry age	8.00 percent	3.50 percent	4.50 percent

<sup>20</sup> FIL = Frozen initial liability method

Texas	TRS	T	No	65/5; 60/20; R80	5 years	Entry age	8.00 percent	3.00 percent	5.00 percent
Texas	MRS	L	Yes	60/5; 60/10; any/20 or 25 option	5 years	Unit credit	7.00 percent	3.00 percent	4.00 percent
Utah	SRS	S, L, T	Yes	65/4; any/30	4 years	Entry age	7.75 percent	3.00 percent	4.75 percent
Vermont	SRS	S	Yes	62/any; any/30	5 years	Entry age	8.25 percent	3.00 percent	5.25 percent
Vermont	TRS	T	Yes	62/any; any/30	5 years	Entry age	8.25 percent	3.00 percent	5.25 percent
Virginia	SRS	S, L, T	Yes	65/5; 50/30	5 years	Entry age	7.50 percent	2.50 percent	5.00 percent
Washington	PERS	S, L	Yes	65/5; 65/10	5 yrs; 10 yrs	Hybrid	8.00 percent	3.50 percent	4.50 percent
Washington	TRS	T	Yes	65/5; 65/10	5 yrs; 10 yrs	Hybrid	8.00 percent	3.50 percent	4.50 percent
West Virginia	PERS	S, L	Yes	60/5; 55/R80	5 years	Entry age	7.50 percent	3.00 percent	4.50 percent
West Virginia	TRS	T	Yes	60/5; 55/30; any/35	5 years	Entry age	7.50 percent	3.00 percent	4.50 percent
Wyoming	WRS	S, L, T	Yes	60/4; R85	4 years	Entry age	8.00 percent	3.50 percent	4.50 percent
Milwaukee	City	L	Yes	60/any; 55/30	4 years	Unit credit	8.50 percent	3.00 percent	5.50 percent
Milwaukee	County	L	Yes	60/any; R75	5 years	County	8.00 percent	3.00 percent	5.00 percent
Wisconsin	WRS	S, L, T	Yes	65/any; 57/30	Immediate	WRS	7.80 percent	4.10 percent	3.70 percent

Sources: 2008 Comparative Study of Major Public Employee Retirement Systems prepared by Daniel Schmidt, Wisconsin Legislative Council in December 2009 (Revised in May 2010).

United States, the median number of years it takes to be fully vested in a state pension program is five years; Maine's five year vesting period requirement, thus, is average.

As seen in Table 5, the actuarial methods vary by state. The actuarial method used by each plan is "a procedure for determining the present value of pension benefits that will be paid in the future and allocating that value and the cost of the benefits to specific time periods" (Schmidt, 2010). Most of the states, including Maine, use the entry-age methodology; a minority of the states uses other methods such as the unit credit method or aggregate cost method.

As discussed earlier in this report, the earnings assumption is a key metric that determines the states' ability to fully fund their pension system. The earnings assumption, or interest assumption is a projection of the percentage the invested funds will grow year over year.

Maine's interest assumption is 7.75 percent, compared to a median of 8 percent across states. As discussed earlier, there is continued controversy surrounding the interest assumptions of state pension systems, as they do not necessarily account for economic upswings and downturns. Maine's slightly less optimistic 7.75 percent is a small step towards more responsible resource management, but a lower estimated return on investment may insulate against unexpected investment losses. Note, too, that some of the same states with the highest funded ratios (e.g. North Carolina, Nebraska, Florida and Georgia), also have earnings assumptions at the same rate or lower than Maine's.

Wage inflation, shown in Table 5, column 9, is a projection of the rate at which invested earnings will grow on account of salary increases over time. Maine's wage inflation rate is a relatively high 4.5 percent, compared to the median across states of 3.5 percent. Although Maine was conservative in terms of the interest assumption, when compared to the median, it is more aggressive than the median in terms of a wage inflation rate.

**Table 6: Comparison of Active Employees with Beneficiaries & Annuitants (Current Recipients), State-Local Retirement Systems 2008**

State	Fund Name	Active Employees	Number of Beneficiaries & Annuitants	Ratio of Active Employees to Beneficiaries	
				RATIO	RANKING AMONG SYSTEMS (Highest=1)
Alabama	ERS	87,247	34,175	2.55	11
Alabama	TRS	141,528	66,928	2.11	32
Alaska	PERS	28,850	24,082	1.20	81
Alaska	TRS	8,531	10,026	0.85	85
Arizona	SRS	227,730	92,673	2.46	15
Arkansas	TRS	70,172	26,801	2.62	10
Arkansas	PERS	44,340	23,555	1.88	46
California	TRS	461,378	223,968	2.06	35
California	PERS	836,914	468,898	1.78	58
Colorado	PERA	190,367	80,965	2.35	19
Connecticut	TRS	51,738	28,787	1.80	56
Connecticut	SERS	53,196	38,093	1.40	76
Delaware	SEPP	34,764	18,056	1.93	42
Florida	FRS	683,302	276,252	2.47	13
Georgia	TRS	225,024	78,633	2.86	8
Georgia	ERS	75,293	35,579	2.12	31
Hawaii	ERS	65,251	35,324	1.85	49
Idaho	PERS	66,765	30,912	2.16	29
Illinois	MRF	180,615	90,132	2.00	39
Illinois	TRS	165,572	91,462	1.81	54
Illinois	SERS	66,237	60,813	1.09	82
Indiana	PERF	138,863	60,332	2.30	22
Indiana	TRF	76,256	42,817	1.78	59
Iowa	PERS	167,823	87,309	1.92	43
Kansas	PERS	153,804	64,188	2.40	16
Kentucky	CERS	95,394	43,001	2.22	26
Kentucky	TRS	75,539	40,739	1.85	50
Kentucky	ERS	52,478	37,711	1.39	77
Louisiana	SERS	61,780	37,575	1.64	67
Louisiana	TRSL	85,979	64,830	1.33	79
<b>Maine</b>	<b>PERS</b>	<b>51,402</b>	<b>34,182</b>	<b>1.50</b>	<b>74</b>
Maryland	SRPS	199,255	112,422	1.77	60
Massachusetts	TRS	89,636	50,024	1.79	57
Massachusetts	SERS	86,529	50,873	1.70	62
Michigan	PSERS	278,642	167,265	1.67	66
Michigan	MERS	37,135	23,995	1.55	71
Michigan	SERS	28,568	48,078	0.59	87
Milwaukee	City	11,581	11,082	1.05	83
Milwaukee	County	4,837	7,308	0.66	86
Minnesota	PERA	146,226	61,436	2.38	18
Minnesota	MSRS	48,361	25,346	1.91	45
Minnesota	TRA	76,938	47,190	1.63	68

Mississippi	PERS	165,733	73,540	2.25	23
Missouri	LAGERS	31,424	13,356	2.35	20
Missouri	PSRS	78,436	41,738	1.88	47
Missouri	SERS	54,542	30,132	1.81	55
Montana	PERS	28,293	16,627	1.70	63
Montana	TRS	18,292	11,788	1.55	72
Nebraska	SEPP <sup>21</sup>	17,200	410	41.95	1
Nebraska	CEPP <sup>22</sup>	7,711	187	41.24	2
Nebraska	SPP	37,832	15,339	2.47	14
Nevada	PERS	106,203	33,479	3.17	3
New Hampshire	NHRS	50,988	22,870	2.23	25
New Jersey	PERS	319,182	133,017	2.40	17
New Jersey	TPAF	142,887	68,479	2.09	34
New Mexico	PERA	52,507	24,910	2.11	33
New Mexico	ERA	63,698	31,192	2.04	36
New York	TRS	274,901	136,706	2.01	38
New York	ERS	528,435	328,726	1.61	69
North Carolina	LGERS	127,959	42,408	3.02	4
North Carolina	TSERS	338,490	145,855	2.32	21
North Dakota	PERS	19,296	6,836	2.82	9
North Dakota	TRF	9,561	6,317	1.51	73
Ohio	PERS	374,002	166,516	2.25	24
Ohio	STRS	173,327	126,506	1.37	78
Oklahoma	TRS	88,678	45,238	1.96	40
Oklahoma	PERS	45,120	26,033	1.73	61
Oregon	PERS	198,626	98,066	2.03	37
Pennsylvania	PSERS	272,690	173,540	1.57	70
Pennsylvania	SERS	110,866	108,146	1.03	84
Rhode Island	ERS	35,051	23,419	1.50	75
South Carolina	SCRS	187,968	100,897	1.86	48
South Dakota	SRS	37,707	19,321	1.95	41
Tennessee	CRS	212,725	98,230	2.17	28
Texas	MRS	100,459	34,123	2.94	6
Texas	TRS	801,455	275,228	2.91	7
Texas	ERS	134,626	72,678	1.85	51
Utah	SRS	93,576	31,731	2.95	5
Vermont	TRS	10,685	5,555	1.92	44
Vermont	SRS	8,442	4,555	1.85	52
Virginia	SRS	345,737	136,394	2.53	12
Washington	PERS	158,022	71,244	2.22	27
Washington	TRS	64,939	38,091	1.70	64
West Virginia	PERS	35,491	20,912	1.70	65
West Virginia	TRS	35,219	28,522	1.23	80
Wisconsin	WRS	263,186	144,033	1.83	53
Wyoming	WRS	35,021	16,275	2.15	30

<sup>21</sup> Converted to individual cash balance plans from defined contribution plans

<sup>22</sup> Converted to individual cash balance plans from defined contribution plans

As shown in Table 6, there is a large range in terms of the number of employees and beneficiaries across states. It is important to assess the ratio of employees to beneficiaries, especially when studying DB plans, as the employee contributions fund the immediate payouts of current beneficiaries. Table 6 ranks the states; the state in first place (Nebraska) has the highest ratio of employees to beneficiaries.

Table 7 shows a comparison of post-retirement features across state pension plans. Many plans have provisions for post-retirement annuity adjustments to account for cost of living increases. Just as rigorous planning for market shifts is important in funding pension plans, setting realistic predictions for adjustments due to inflation and increases in CPI is part of a larger strategy for better fiscal health of pension funds. There are several types of provisions, including adjustments indexed to CPI, automatic percentage increase, investment surplus, and ad hoc or no increase (Schmidt, 2010). Many states institute a cap on annual post retirement increases only past a certain amount (Massachusetts' begins at \$12,000), or institute a minimum level of increase (Idaho has a minimum of 1 percent). In Maine's case, however, adjustments are indexed to CPI and then simply capped at 4 percent. The PERS benefit, additionally, is exempt up to \$6,000 in Maine. This is a relatively small amount of grace for Maine's beneficiaries compared to other states who afford an exemption level more than twice that; many more exempt PERS benefits from taxation, entirely. Although exempt from federal individual income taxes, Maine's state employees and teachers must add their state retirement system contributions back into their income for taxation. Notably, Maine is one of only six states that do not provide social security coverage for teachers and state employees; the other states are Massachusetts, Alaska, Colorado, Louisiana, Nevada, and Ohio. An additional five states do not cover teachers but do cover state employees: California, Illinois, Kentucky, Missouri, and Texas.

**Table 7: Comparison of Pension Plan Post-Retirement Features, State-Local Retirement Systems 2008**

State	Fund Name	Employee Coverage <sup>23</sup>	Social Security Coverage?	Formula Multiplier	Limitation	Annual Post-Retirement Increases	State Taxation of PERS Benefits
Alabama	ERS	S, L	Yes	2.01 percent	None	Ad hoc only	Benefits exempt
Alabama	TRS	T	Yes	2.01 percent	None	Ad hoc only	Benefits exempt
Alaska	PERS	S, L	No	N/A; defined contribution plan	None	N/A: acct balance + invest earnings	No income tax law
Alaska	TRS	T	No	N/A; defined contribution plan	None	N/A: acct balance + invest earnings	No income tax law
Arizona	SRS	S, L, T	Yes	2.1 percent (1st 20 yrs); 2.15 percent (next 5 yrs); 2.2 percent (next 5 yrs); 2.3 percent over 30 yrs	80 percent FAS	Excess earnings - 4 percent cap	Exempt to \$2,500
Arkansas	PERS	S, L	Yes	2 percent	100 percent FAS	3 percent	Exempt to \$6,000
Arkansas	TRS	T	Yes	2.15 percent	None	3 percent	Exempt to \$6,000
California	PERS	S, L	Yes	2 percent at 55; 2.5 percent at 63 or older	65 yrs max	2 percent	Benefits taxable
California	TRS	T	No	2 percent at 60; 2.4 percent at 63	100 percent FAS	2 percent	Benefits taxable

<sup>23</sup> S = State, L = Local, T = Teachers

Colorado	PERA	S, L, T	No	2.50 percent	100 percent FAS	Lesser of 3 percent, CPI, or 10 percent of COLA fund assets	Exempt to \$20,000/\$24,000
Connecticut	SERS	S	Yes	1.33 percent + .5 percent over \$48,800; 1.625 percent yrs over 35	None	60 percent of CPI up to 6 percent, 2.5 percent minimum	Benefits taxable
Connecticut	TRS	T	No	2 percent	75 percent FAS	Excess earnings - 1.5 percent or 6 percent cap	Benefits taxable
Delaware	SEPP	S, T	Yes	1.85 percent	None	Ad hoc only	Exempt to \$12,500
Florida	FRS	S, L, T	Yes	1.6 percent to 1.68 percent (age & yrs of service)	100 percent FAS	3 percent	No state income tax
Georgia	ERS	S	Yes	2 percent	90 percent high yr	CPI - 1.5 percent semi-annual cap	Exempt to \$35,000
Georgia	TRS	T	Yes	2 percent	40 yrs max	CPI - 1.5 percent semi-annual cap	Exempt to \$35,000
Hawaii	ERS	S, L, T	Yes	2 percent	None	2.50 percent	Benefits exempt
Idaho	PERS	S, L, T	Yes	2 percent	100 percent FAS	CPI - 1 percent minimum to 6 percent max (conditional)	Benefits taxable
Illinois	SERS	S	Yes	1.67 percent	75 percent FAS	3 percent	Benefits exempt
Illinois	TRS	T	No	2.20 percent	75 percent FAS	3 percent	Benefits exempt
Illinois	MRF	L	Yes	1.67 percent (1st 15 yrs); 2 percent (added yrs)	75 percent FAS	3 percent	Benefits exempt
Indiana	PERF	S, L	Yes	1.1 percent + money purchase annuity	None	Ad hoc only (1.5 percent presumed)	Benefits taxable
Indiana	TRF	T	Yes	1.1 percent + money purchase annuity	None	Ad hoc only (1.5 percent presumed)	Benefits taxable



Iowa	PERS	S, L, T	Yes	2 percent (1st 30 yrs); 1 percent (next 5 yrs)	65 percent FAS	Excess earnings - CPI; 3 percent cap	Exempt to \$6,000, \$12,000 married
Kansas	PERS	S, L, T	Yes	1.75 percent	None	Ad hoc only	Benefits exempt
Kentucky	ERS	S	Yes	1.97 percent	None	1.50 percent	Exempt to \$41,110
Kentucky	CERS	L	Yes	2 percent	None	1.50 percent	Exempt to \$41,110
Kentucky	TRS	T	No	2.5 percent for up to 30 yrs; 3 percent for over 30 yrs	100 percent FAS	1.50 percent	Exempt to \$41,110
Louisiana	SERS	S	No	2.50 percent	100 percent FAS	Excess earnings; CPI; 3 percent cap	Benefits exempt
Louisiana	TRSL	T	No	2.50 percent	100 percent FAS	CPI - 3 percent cap	Benefits exempt
Maine	PERS	S, L, T	No	2 percent	None	CPI - 4 percent cap	Exempt to \$6,000
Maryland	SRPS	S, L, T	Yes	1.82 percent	100 percent FAS	CPI - 3 percent cap	Exempt to \$23,600
Massachusetts	SERS	S	No	.5 percent to 2.5 percent (age-related)	80 percent FAS	CPI - on 1st \$12,000-conditional, 3 percent cap	Benefits exempt
Massachusetts	TRS	T	No	.1 percent to 2.5 percent (age-related) + 2 percent for each yr over 24	80 percent FAS	CPI - on 1st \$12,000-conditional, 3 percent cap	Benefits exempt
Michigan	SERS	S	Yes	1.50 percent	None	3 percent (\$300 annual cap)	Benefits exempt
Michigan	MERS	L	Yes	1.3 percent to 2.5 percent (employer option)	80 percent FAS for multipliers of 2.25 percent and over	3 plans - depending on employer agreement (generally 2.5 percent)	Benefits exempt
Michigan	PSERS	T	Yes	1.50 percent	None	3 percent	Benefits exempt
Minnesota	MSRS	S	Yes	1.70 percent	None	CPI - 2.5 percent cap plus investment surplus	Benefits taxable

Minnesota	PERA	L	Yes	1.70 percent	None	CPI - 2.5 percent cap plus investment surplus	Benefits taxable
Minnesota	TRA	T	Yes	1.90 percent	None	CPI - 2.5 percent cap plus investment surplus	Benefits taxable
Mississippi	PERS	S, L, T	Yes	2 percent (1st 25 yrs); 2.5 percent (added yrs)	100 percent FAS	3 percent	Benefits exempt
Missouri	SERS	S	Yes	1.7 percent (and .8 percent to age 62 if R80 met)	None	80 percent CPI - 5 percent cap	Exempt to \$6,000/\$12,000
Missouri	LAGERS	L	Yes	1 percent to 8 percent (varies by employer option)	None	CPI - 4 percent cap	Exempt to \$6,000/\$12,000
Missouri	PSRS	T	No	2.5 percent; 2.55 percent with 31 or more yrs of service	100 percent FAS	CPI - 5 percent cap; 80 percent of original benefits lifetime cap	Exempt to \$6,000/\$12,000
Montana	PERS	S, L	Yes	1.785 percent; 2 percent with at least 25 yrs of service	None	3 percent	Exempt to \$3,600
Montana	TRS	T	Yes	1.67 percent	None	1.50 percent	Exempt to \$3,600
Nebraska	SEPP	S	Yes	None		Money purchase	Benefits taxable
Nebraska	CEPP	L	Yes	None		Money purchase	Benefits taxable
Nebraska	SPP	T	Yes	2 percent	None	CPI - 2.5 percent cap	Benefits taxable
Nevada	PERS	S, L, T	No	2.67 percent	75 percent FAS	2 percent to 5 percent (varies)	No income tax law
New Hampshire	NHRS	S, L, T	Yes	1.67 percent to 65; 1.515 percent after 65	100 percent FAS	Ad hoc	Benefits exempt
New Jersey	PERS	S, L	Yes	1.82 percent	None	60 percent of CPI	Exempt to \$15,000/\$20,000
New Jersey	TPAF	T	Yes	1.82 percent	None	60 percent of CPI	Exempt to \$15,000/\$20,000
New Mexico	PERA	S, L	Yes	3 percent	80 percent FAS	3 percent	Benefits taxable

New Mexico	ERA	T	Yes	2.35 percent	None	50 percent of CPI - 2 percent min; 4 percent cap	Benefits taxable
New York	ERS	S, L	Yes	1.67 percent (under 20 yrs); 2 percent (over 20 yrs); 3.5 percent (over 30 yrs)	None	50 percent of CPI, max 3 percent on 1st \$18,000	Benefits exempt
New York	TRS	T	Yes	Same as New York's ERS	None	50 percent of CPI, max 3 percent on 1st \$18,000	Benefits exempt
North Carolina	TSERS	S, T	Yes	1.82 percent	None	Ad hoc	Exempt to \$4,000/\$8,000
North Carolina	LGERS	L	Yes	1.85 percent	None	Ad hoc	Exempt to \$4,000/\$8,000
North Dakota	PERS	S, L	Yes	2 percent	None	Ad hoc	Benefits taxable
North Dakota	TRF	T	Yes	2 percent	None	Ad hoc	Benefits taxable
Ohio	PERS	S, L	No	2.2 percent (1st 30 yrs); 2.5 percent (added yrs)	100 percent FAS	3 percent cap	Benefits taxable
Ohio	STRS	T	No	2.2 percent (1st 35 yrs); 2.5 percent (35 or more yrs)	100 percent FAS	3 percent cap	Benefits taxable
Oklahoma	PERS	S, L	Yes	2 percent	None	Ad hoc	Exempt to \$10,000
Oklahoma	TRS	T	Yes	2 percent	None	Ad hoc	Exempt to \$10,000
Oregon	PERS	S, L, T	Yes	1.67 percent	None	CPI - 2 percent cap	Benefits taxable
Pennsylvania	SERS	S	Yes	2.50 percent	100 percent high yr	Ad hoc	Benefits exempt
Pennsylvania	PSERS	T	Yes	2.50 percent	None	Ad hoc	Benefits exempt
Rhode Island	ERS	S, T	Yes	1.7 percent (1st 10 yrs); 1.9 percent (2nd 10 yrs); 3 percent (21-34 yrs); 2 percent (35+)	80 percent FAS	3 percent	Benefits taxable

South Carolina	SCRS	S, L, T	Yes	1.82 percent	None	CPI - 4 percent cap	\$15,000 deduction
South Dakota	SRS	S, L, T	Yes	1.70 percent	None	3.10 percent	No income tax law
Tennessee	CRS	S, L, T	Yes	1.5 percent + .25 percent FAS over SSIL	94.5 percent FAS	CPI - 3 percent cap	Benefits exempt
Texas	ERS	S	Yes	2.30 percent	100 percent FAS	Ad hoc	No income tax law
Texas	TRS	T	No	2.30 percent	None	Ad hoc	No income tax law
Texas	MRS	L	Yes	None		Up to 70 percent of CPI (employer option)	No income tax law
Utah	SRS	S, L, T	Yes	2 percent	None	CPI - 4 percent cap	Exempt to \$7,500/\$15,000
Vermont	SRS	S	Yes	1.67 percent	50 percent FAS	50 percent of CPI - 5 percent cap	Benefits taxable
Vermont	TRS	T	Yes	1.67 percent	50 percent FAS	50 percent of CPI - 5 percent cap	Benefits taxable
Virginia	SRS	S, L, T	Yes	1.70 percent	100 percent FAS	CPI - 5 percent cap	Exempt to \$12,000
Washington	PERS	S, L	Yes	2 percent; 1 percent + .25 percent per yr after 20 yrs (non-contributory)	None	CPI - 3 percent cap	No income tax law
Washington	TRS	T	Yes	2 percent; 1 percent + .25 percent per yr after 20 yrs (non-contributory)	None	CPI - 3 percent cap	No income tax law
West Virginia	PERS	S, L	Yes	2 percent	None	No	Exempt to \$2,000
West Virginia	TRS	T	Yes	2 percent	None	No	Exempt to \$2,000
Wisconsin: Milwaukee	City	L	Yes	2 percent	70 percent FAS	1.5 percent yrs 1-4; 2 percent thereafter	Exempt for some
Wisconsin: Milwaukee	County	L	Yes	2 percent	80 percent FAS	2 percent	Exempt for some

Wisconsin	WRS	S, L, T	Yes	1.60 percent	70 percent FAS	Investment earnings; reductions possible	Exempt for some
Wyoming	WRS	S, L, T	Yes	2.125 percent (1st 15 yrs); 2.25 percent (added yrs)	None	CPI - 3 percent cap	No income tax law
Sources: 2008 Comparative Study of Major Public Employee Retirement Systems prepared by Daniel Schmidt, Wisconsin Legislative Council in December 2009 (Revised in May 2010).							

## V. Financing Trends and Progress <sup>1</sup>

As discussed earlier in the report, although some states have separate pension systems for state employees and teachers, Maine's state and local retirement system is a single, unified system administered by the Maine Public Employees Retirement System (MainePERS).<sup>2</sup> MainePERS is an independent state agency whose operation is the responsibility of a Board of Trustees whose composition is defined by state law and whose eight members must be confirmed by the Legislature (MainePERS, n.d., "Board of Trustees"). They, in turn, choose the System's Executive Director whose Office has administrative responsibility for the System and its operations, oversees actuarial work and investments, manages internal audits, and carries out the System's executive functions and day-to-day responsibilities (MainePERS, n.d., "The Organization"). By statute System assets and proceeds thereof are held, invested, and disbursed in trust for retiree benefits and cannot be appropriated for other purposes by the Legislature (ME Const., art. IX, § 18).

All plans administered by MainePERS are of the defined benefit type, which means they provide eligible retired employees with lifetime pensions whose amounts are determined by statutory formulas.<sup>3</sup> The State and Teacher's Retirement Program is the largest in both members covered and fiscal scope of the defined benefit plans, and as discussed previously, Maine does not participate in Social Security for state employees and public teachers. This means that the State does not contribute to Social Security income security on behalf of employees and that

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<sup>1</sup> This section of the report was written by Eric Davis. Mr. Davis also was responsible for compiling pension data from US Census files.

<sup>2</sup> In addition to administering the retirement system for state employees and teachers, MainePERS also oversees several smaller programs: the Judicial Program, the Legislative Program, and the Participating Local Districts (PLD) Consolidated Plan.

<sup>3</sup> MainePERS also operates a supplementary retirement savings defined contribution plan called MaineSTART, which is similar to a 401(k) plan in that contributions to the plan are specified but retirement benefits depend on the performance of the employee's investments.

employees do not earn any "social security credits," which contribute towards eligibility to receive Social Security income and disability benefits, while employed by the State.<sup>4</sup> The pension annuities paid to eligible retirees are made in lieu of Social Security under Section 3121(b)(7)(F) of the Internal Revenue Code (IRC), and to maintain this exemption retiree benefits generally need to meet a minimum requirement such that, in line with IRC Section 31.3212(b)(7)-2(e)(2)(i), they are "comparable to those provided in the Old-Age portion of the Old-Age, Survivor, Disability Insurance program under Social Security" (Social Security Online, 2011). Because of this exemption, the State is allowed to pay 5.5% of payroll for the State and Teacher's Retirement Program instead of the 6.2% rate required under Social Security. Employees, in contrast, pay a higher 7.65% of salary instead of 6.2%.

## **5.1 Pension Financing: Trends by Source**

The Maine Public Employees Retirement System (MainePERS) is financed through three revenue streams: employee contributions, employer contributions, and returns on invested system assets. System assets are managed and invested by MainePERS's Office of the Executive Director.

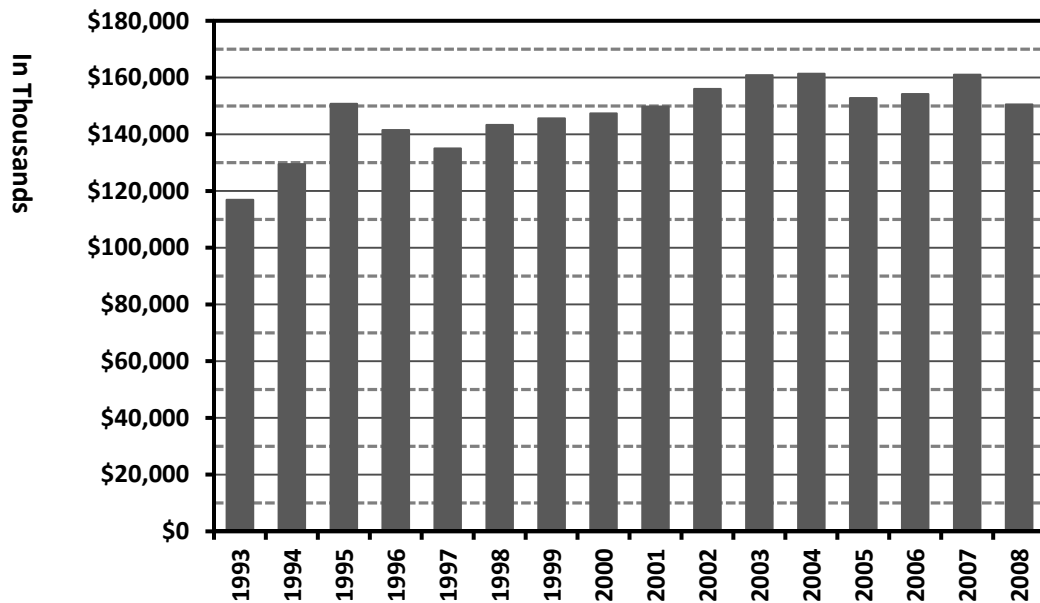
### **Employee contributions**

Employee contributions to MainePERS involve each employee paying a specified percentage of salary (7.65% in FY2011). Employee contribution levels for state employees and teachers are set by the Legislature. Figure 1 shows annual employee payments into the Retirement System, adjusted to 2008 dollar values for meaningful comparison.

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<sup>4</sup> The Legislative and Judicial Programs also do not participate in Social Security. PLD employees may or may not earn Social Security credits depending on whether their employer has a Social Security 218 Agreement or their employer has excluded their employee classification from MainePERS.

**Figure 1: Annual Employee Contributions to MainePERS for Current, Position Specific Costs  
Inflation Adjusted 2008 Dollar Values, FY1993 - FY2008**



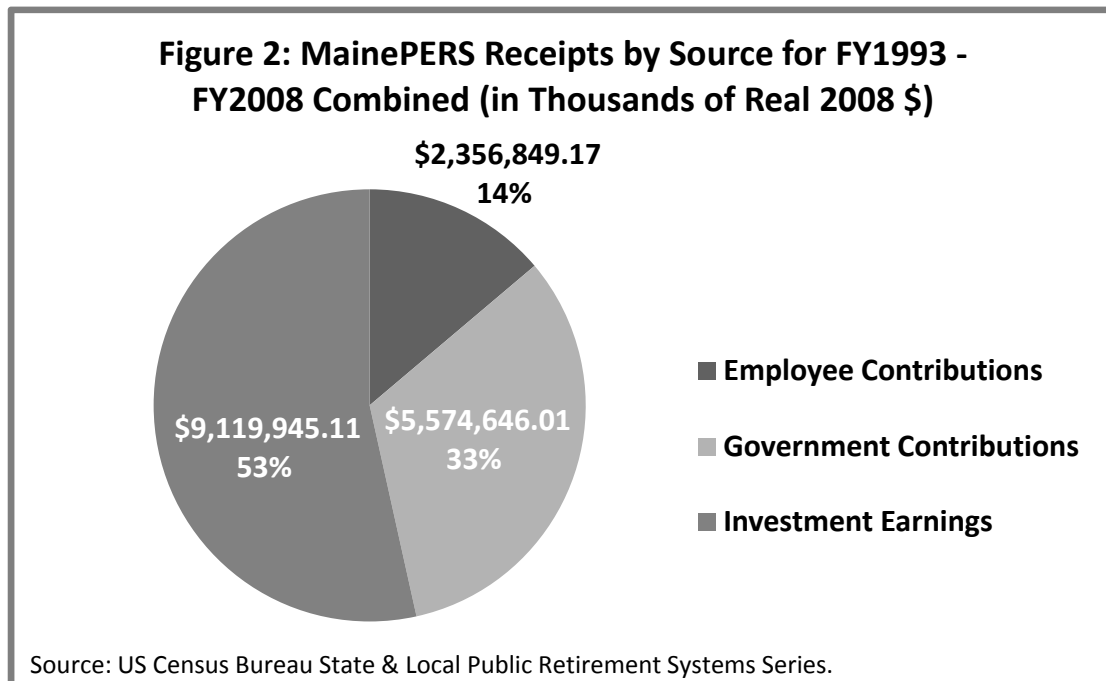
Source: US Census Bureau State & Local Public Retirement Systems Series.

Annual employee payments grew by 37.7% in inflation adjusted 2008 dollars between FY1993 and FY2007, an increase of approximately \$44,110,000. If the recession affected FY2008 is used as the terminating point, the percentage increase is 28.7% instead. Either way, the general trend for this revenue stream over the past two decades is one of positive -- but not constant -- growth. There are ups and downs in the size of yearly employee contributions, but the range these ups and downs fluctuate around has traveled upward.

In the aggregate, total contributions valued at \$2.4 billion in inflation adjusted 2008 dollars were made by personnel working in state government and local schools in Maine between FY1993 and FY2008. This accounted for approximately 14% of the Retirement System's total financing, as displayed by Figure 2 on the next page. This may seem small in comparison to the employer contribution and investment earnings shares, but it is important to recognize that these dollars were derived solely from active employees whose numbers have remained relatively



static over this time period. Former employees of state government and public schools cease making contributions once they leave public service, so the growth in this revenue stream and the assets it has raised are substantial.



### **Employer Contributions**

In contrast to employees, Maine State government must contribute: (1) the employer's annual share, which is an amount adequate to pay each retiree the benefit level promised and (2) an amount adequate to amortize the unfunded liability of MainePERS. Between 1993 and 2008, annual contributions by the State of Maine comprised one-third of the growth in system assets (Figure 2). This funding was designed to cover not only the employer share of financing current benefits that were accruing to state works and elementary and secondary education personnel but, even more significantly (dollar wise), to pay down (1) the long term unfunded liability and (2) borrowing from the system of \$73 million in 1991.

### ***Meeting Currently Accruing Obligations for Earned Benefit Retirements***

The State's annual current contributions to MainePERS that are made on behalf of current employees are referred to as normal costs. These costs reflect the annual value of retirement benefits earned during the fiscal year by current employees. In other words, the annual normal cost is "the present value of future pension benefits earned by employees in the current year" (MainePERS, 2011, pp. 3). In addition to contributing on behalf of State employees, Maine State government makes an annual contribution equal to the employers' share for Maine school districts. Thus, normal costs include coverage for both state workers and elementary and secondary education personnel.

As described earlier, eligibility for a pension requires that a public employee work for a specified number of years, at which point the employee gains the status of being "vested" in the System. Employees who leave public employment before gaining vested status are allowed to withdraw funds equivalent to the contributions they made to the System. However, contributions made by the State on their behalf remain a part of System assets and continue to earn after the departure of the employee for whom funds were contributed. As such, foregone potential retirement benefits are an essential component of the Retirement System's base financing and serve to reduce the magnitude of the State's required annual contribution.

### ***State Contributions Intended to Reduce the Unfunded Liability***

As will be discussed further in the next section of the report, the Maine Public Employees Retirement System has a large, unfunded liability accumulated through underfinanced benefits earned prior to the current year by previous and current state employees and educators. The large unfunded liability represents neglect of a crucial financial obligation that was allowed to

accumulate over many years while the State of Maine redirected promised resources to finance other endeavors.

Contributions to the System intended to amortize the longstanding unfunded liability are referred to as unfunded actuarial liability (UAL) costs. The UAL is "the amount by which the actuarial liability for current and former employees is greater than pension assets" (ibid, p. 55). In other words, normal costs are the amount of new pension benefits earned by employees enrolled in the Retirement System in a given year, while the UAL cost is the annual financing required to amortize unfunded pension benefits owed to former and current employees. Unlike paying off a mortgage, the annual contribution required to pay off an unfunded liability depends on (1) investment earnings during the previous fiscal year, *which will have either increased or decreased the unfunded liability*, (2) assumptions about earnings in the following year, and (3) deviations from actuarial assumptions that have increased or decreased the unfunded liability. Pension plans may include a provision to amortize the unfunded liability within a specified period. When a system is following an amortization schedule for its unfunded liability, an annual required contribution (ARC) must be determined.

In the case of Maine, prior to 1995 the State's annual contributions toward the unfunded liability were a matter of Gubernatorial budget recommendations and Legislative decision making. This changed in 1995 when an amendment to Maine's constitution was approved -- in large part because the State was not meeting its responsibility to pay off the UAL -- mandating full funding of the State and Teachers Retirement Program by the end of the State's fiscal year 2028.<sup>5</sup> MainePERS now calculates the ARC contribution to permit amortization by the deadline, with the ARC determined every two years to coincide with Maine's biennial budget process.

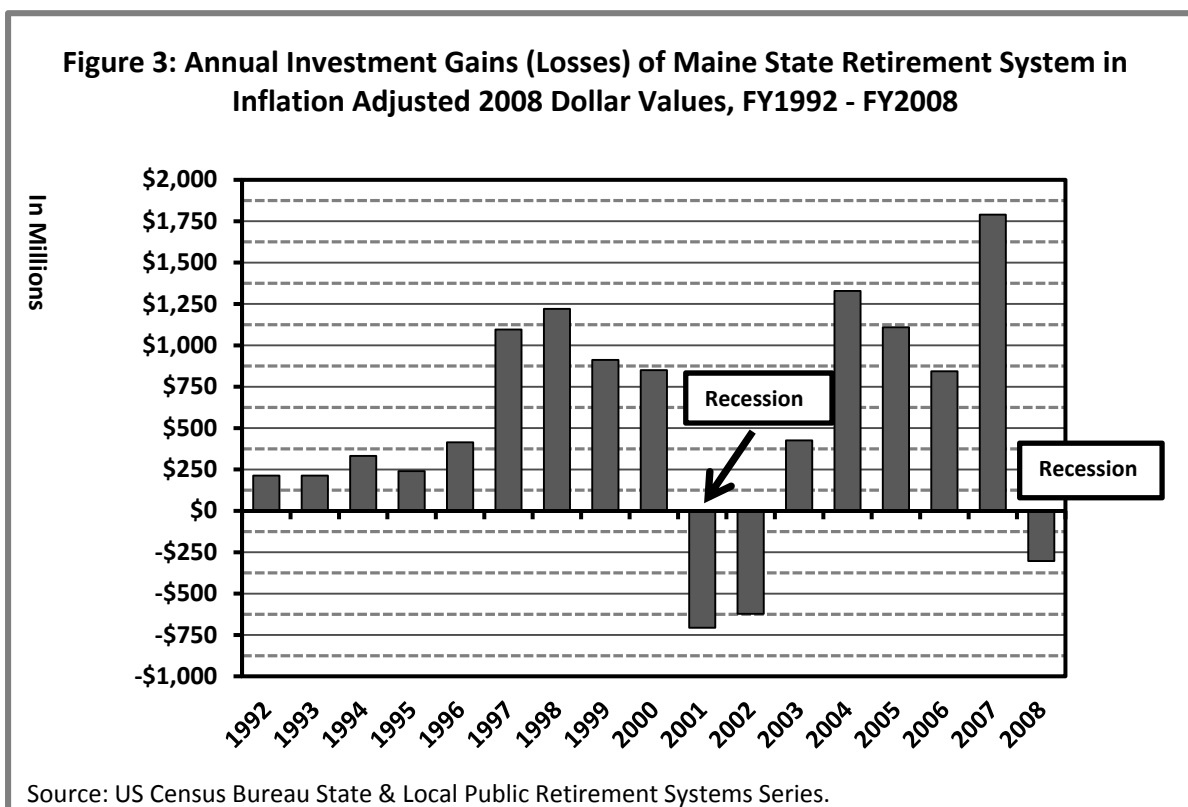
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<sup>5</sup> The other three defined benefit plans administered by MainePERS are on a "rolling" amortization schedule where the remaining UAL balance is amortized every year over the same fixed term. The Legislative and Judicial plans use a 10-year term, and the Participating Local Districts plan uses a 15-year term.

Due to large losses in System holdings during the recent recession, the ARC payments for the current biennium have risen sharply. This issues are explored further in the next section of the report, which considers comparative trends in the unfunded liability and pension system financial performance.

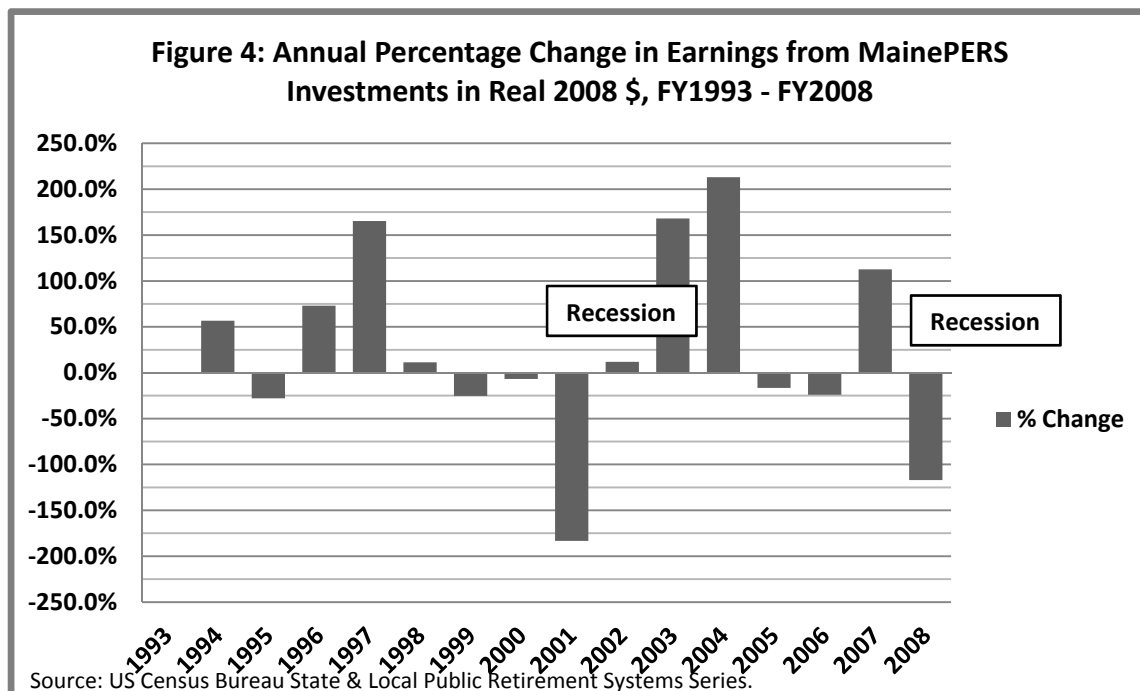
### Earnings on the Investment of Pension System Assets

Investments are made and managed by MainePERS's Office of the Executive Director using System assets from previous investment earnings and employer and employee contributions. Most of these investments are made in seven major asset categories: publicly traded domestic stocks, publicly traded foreign stocks, cash and cash-like securities, publicly traded domestic bonds, infrastructure, private equity, and real estate (MainePERS, 2010, pp. 66). Returns on investments depend on the performance of the System's portfolios and, unlike employer and employee contributions, can be either positive or negative in a given year.



While recent attention has focused on investment losses, a review of Figure 3 reveals that over seventeen years earnings from investments greatly exceeded losses caused by the 2001 market crash and the onset of the most recent recession in 2008. From FY1993 to FY2008 MainePERS investments yielded approximately \$10.75 billion in gross assets and lost \$1.63 billion for a net gain of around \$9.12 billion. Moreover, looking back to Figure 2 we see that investment earnings explain 53% of asset growth, making investments the largest source of financing for the Retirement System.

However, despite the good news above it is important to remember that investment earnings are volatile. Figure 4 displays the year-to-year percentage changes in investment earnings which show greater responsiveness to recession-induced losses and market gains than the dollar trends suggest.



Annual earnings may be very large in years when the U.S. stock market does very well but negative in recessionary years. These peaks and troughs mirror the U.S. economy. Because System assets are withdrawn at a modest annual rate, these fluctuations can be weathered. A

sound long-term investment plan does not require high earnings every year but rather strong positive earnings over time. MainePERS appears to meet this criterion because, as we saw earlier, the Retirement System earned more than \$9 billion from investments between FY1993 and FY2008 and, despite a large loss between FY2008 and FY2009, the Retirement System's most recent Comprehensive Annual Financial Report shows that earnings growth resumed in FY2010. So long as the U.S. economic recovery continues it is likely that annual investment earnings will rebound just as they have historically in the past. For example, MainePERS's investments had negative returns totaling approximately \$1.3 billion during FY2001 and FY2002 because of the 2001 Recession, but in the following three years returns from investments yielded more than double the amount lost.

## **5.2 Accumulated Pension System Assets**

Retirement System assets are built upon three streams of revenue: investment earnings, employer (i.e. State Government) contributions, and employee contributions. Employee contributions are the stablest and most predictable source, based as they are on a fixed percentage of salary, but they are also the smallest in the aggregate. Employer contributions are the second most stable, with the annual required contribution (ARC) and fixed percentage of payroll providing an annual baseline, but because the exact amount is a matter of Gubernatorial recommendation and Legislative decision making it is hard to predict the size of the State's contribution year-to-year. The employer contribution comprised approximately one-third of the growth in assets from FY1993 to FY2008. Investment earnings, in contrast, accounted for over 50% of new accumulated assets over the same time period but are volatile and unpredictable in the short-term and can decrease accumulated assets in years with negative investment returns. All three revenue sources provide significant funding for the Retirement System, and striking a

healthy and sustainable balance between them is important for the long-term health of the System.

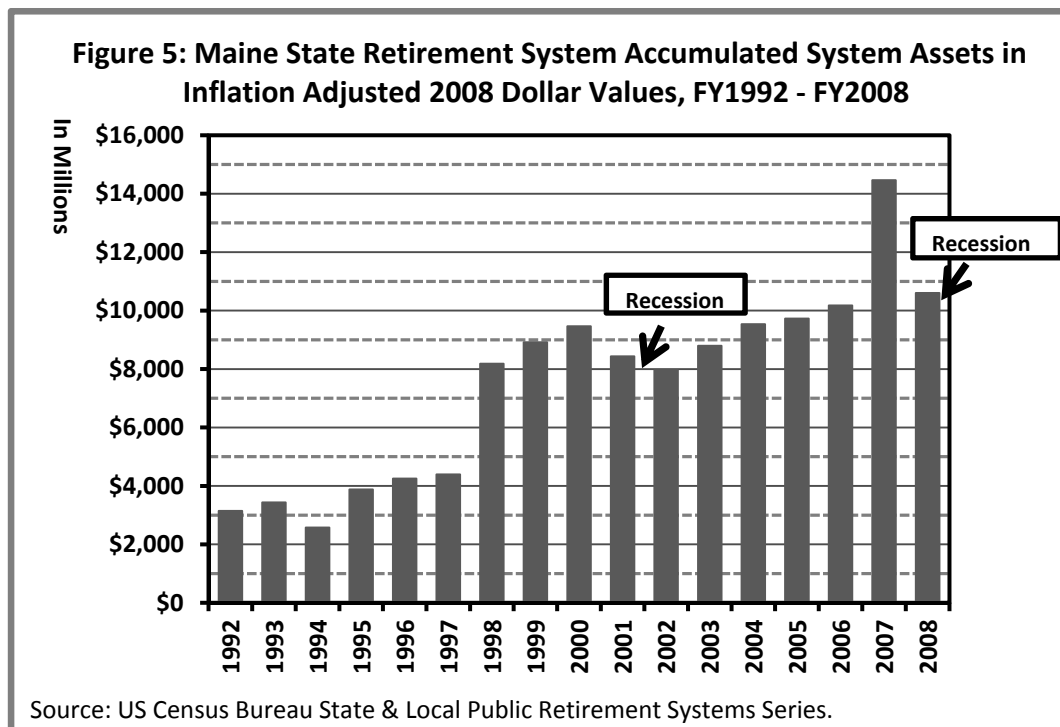


Figure 5 above displays the change in the Retirement System's accumulated assets from FY1992 through FY2008, a nearly two decade long period that included the tail-end of the early 1990s recession, the collapse of the dot-com bubble, and the onset of the most recent recession. It was also a period of remarkable economic growth through the latter 1990s and mid-2000s, with the Dow Jones Industrial Average reaching a record 14,000+ high in October 2007.

As Figure 5 makes apparent, despite the ups and downs in the U.S. economy mentioned above accumulated System assets grew considerably over these seventeen years. More specifically, System assets increased 209% from FY1992 to FY2008 in inflation adjusted 2008 dollars, rising from approximately \$2.64 billion to \$10.6 billion. This ties back in with Figure 3's display of annual investment earnings over this time period and how, despite years with recession-induced investment losses, investment gains were more common and outweighed the

losses. It also corroborates the wisdom of a long-term asset strategy; ups and downs in accumulated assets are virtually unavoidable when a source of funding as volatile as investment earnings is used, but because these cycles are unavoidable they can also be planned for by choosing a strategy for growth over time rather than striving for a riskier increase every year.

Returning to Figure 5, FY2007 represented a highpoint in the Retirement System's accumulated asset history and a striking \$4 billion increase from FY2006. If it is used as the endpoint rather than FY2008, System holdings increased by 321% instead of 209% over the time period. However, hindsight and close examination suggest that the unprecedented gain seen in FY2007 was an anomaly produced by an overheated market and an accumulated asset level the State is unlikely to return to soon. The presence of such a sudden and sizeable rise in earnings may even have indicated the problems that followed. The FY2008 level of assets, in contrast, appears more in line with the continuing trend and was, interestingly enough, still greater than FY2006's level of System assets.



## VI. Pension Financing Performance and Trends<sup>1</sup>

Pension financing issues are not a new topic of concern in Maine. According to Bowles, the Maine State Retirement System had unfunded liabilities as early as 1924 (Bowles, 1954). In 1954, a report to the Maine State Legislature, Bowles wrote:

The funding methods in general are providing for a proper accumulation of funds to meet the future liabilities of the System with the exception of the amounts contributed for teachers' benefits. A considerable unfunded liability exists in respect to benefits for teachers hired prior to 1924 and the present level of contributions for the most part merely covers current pension payments.

In 1993, at a time when the unfunded liability was \$1.3 billion, in the *Dollars and Sense* report on the Maine state budget, LaPlante and Devlin provided the Governor and Legislature with this sobering assessment:

As the result of a lack of fiscal discipline, financing the state retirement system is nearing a crisis stage that extends well beyond the funding deficit projected for the current budget. Any further deferment or slowdown in amortizing the unfunded liability will worsen our already inferior relative standing among the states and add millions of dollars to the annual cost of the system. Unless a concerted effort is made to payoff what we must in a timely way, our grandchildren could end up paying for benefits that accrued to our parents. (p. 80)

The question that arises is this: "Given long-term knowledge of funding inadequacies, how well has Maine done at improving the financial condition of the pension system?" This section of the report will consider pension system funding ratios to gauge financial performance. The following key ratio indicators of pension system fiscal health will be examined

- The ratio of funded assets to unfunded obligations

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<sup>1</sup> This section of the report was researched and written by Tim Feeley. Mr. Feeley undertook and completed the laborious and painstaking task of compiling data unfunded liability data for all state and local retirement systems shown in Table 8, which was required to analyze trends.

- The ratio of system assets to disbursements
- The ratio of system receipts to disbursements and
- The ratio of system earnings to disbursements

## **6.1 Analysis of Funded Ratios: System Assets Compared with System Obligations**

The ratio of funded assets to unfunded obligations, or what generally is referred to as the “funded ratio” is used to assess the capacity of a pension system to provide the benefits that have accrued *to date* to former and current employees.

### ***Data Sources***

The United States Census estimates that there are approximately 2,550 pension plans operated by some level of government in the United States. The Census only collects data on roughly half of these systems. The Public Fund Survey and Wilshire Consultants release a yearly survey of pension systems based on approximately 125 systems operated at various levels of government. The Pew Center on the States used a sample of 231 plans operated at statewide levels for their “Trillion Dollar Gap” study. All of these methods have limitations, but all can be informative.

The Pew Center on the States “Trillion Dollar Gap” report data was only current through 2008, and the author collected data on the systems they identified for 2009. Information for this analysis was collected for 218 pension systems reporting in 2009 and 143 systems reporting in 2010. Only Ohio has not released any data since 2008.

Data was collected on the basis of the year the actuarial valuation was conducted, rather than when it was released. Data was collected from publicly available sources; primarily Comprehensive Annual Financial Reports (CAFR) or yearly actuarial valuation reports.

However, not all plans released valuations in 2009 and/or 2010. The 2009 and 2010 data is then compared to that reported by the Pew Center for 1997 to 2008.

It is important to recognize that one state may have different pension systems for game wardens, teachers, state employees or state troopers, while some states have a unified system for all public sector employees. Aggregating the systems into a statewide total is a way to make better comparisons from state to state. Once data was collected for the systems in the sample, the data was aggregated for each state and a total was arrived at for these key pieces of data:

- Actuarially Accrued Assets (A)
- Actuarially Accrued Liabilities (B)
- Unfunded Actuarially Accrued Liabilities (B-A)
- Funded Ratio (A/B)

The Maine Public Employees Retirement System's Comprehensive Annual Financial Report consolidates all data for the State Employee and Teacher system and the participating local districts (municipalities). The State of Maine Comprehensive Annual Financial Report, however, reflects only the portion of the retirement system that is obligated for the State Employee and Teacher plan. The Pew Center on the States chose to use the Maine Public Employees Retirement System's CAFR data, so that is what the author used to update the 2009 and 2010 data used in this analysis.

### ***Data Adjustment***

The financing of public pension systems is looked at with long horizons and actuarial data is seldom reported in a timely manner. Many funds report actuarial data for the fiscal year ending June 30, 2009 in their FY 2010 CAFR that is generally released six months after the close

**Table 8: State Pension System Funding Ratios, 1997 to 2010**

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010*
Alabama	110.9%	101.0%	102.0%	103.1%	100.8%	96.7%	92.7%	89.6%	83.7%	82.3%	79.4%	77.1%	73.9%	N/A
Alaska	101.3%	102.6%	104.3%	100.4%	98.5%	72.5%	69.5%	67.4%	64.0%	74.3%	74.2%	75.7%	60.9%	N/A
Arizona	116.7%	119.9%	117.7%	121.7%	117.8%	108.0%	99.4%	92.9%	86.1%	84.7%	80.7%	80.2%	77.3%	75.8%
Arkansas	97.4%	99.9%	101.4%	101.4%	99.6%	95.6%	89.8%	86.4%	81.7%	82.2%	87.2%	87.2%	77.5%	74.8%
California	105.2%	113.8%	118.1%	115.5%	106.0%	96.3%	86.5%	86.4%	86.9%	87.4%	87.5%	86.9%	80.7%	N/A
Colorado	91.6%	96.5%	103.1%	105.2%	98.6%	88.3%	75.6%	70.6%	73.3%	74.1%	75.1%	69.8%	70.1%	N/A
Connecticut*	63.7%	65.1%	65.1%	72.1%	72.1%	69.0%	66.1%	60.0%	59.2%	56.5%	56.6%	61.6%	57.5%	53.4%
Delaware	96.3%	99.8%	106.3%	108.1%	104.9%	102.6%	100.5%	97.6%	96.3%	96.4%	98.5%	98.2%	94.4%	92.0%
Florida	91.3%	106.0%	113.5%	118.1%	117.9%	115.0%	114.2%	112.1%	107.3%	101.5%	101.8%	101.4%	87.1%	86.6%
Georgia	90.4%	96.5%	98.2%	102.8%	103.5%	102.0%	101.1%	100.3%	98.0%	96.2%	94.6%	91.6%	87.1%	N/A
Hawaii	N/A	N/A	93.6%	94.4%	90.6%	84.0%	75.9%	71.7%	68.7%	65.0%	67.5%	68.8%	64.6%	N/A
Idaho	95.2%	107.3%	110.3%	114.4%	95.7%	84.1%	83.0%	91.0%	93.5%	94.9%	105.1%	93.3%	73.7%	78.6%
Illinois	70.1%	72.1%	73.0%	74.7%	63.1%	53.5%	48.2%	60.9%	60.3%	60.5%	62.6%	54.3%	50.6%	45.4%
Indiana	N/A	61.1%	64.0%	66.8%	68.6%	66.3%	69.0%	68.9%	67.4%	69.2%	70.5%	72.4%	66.4%	N/A
Iowa	93.9%	95.3%	97.0%	97.7%	97.2%	92.6%	89.6%	88.6%	88.7%	88.4%	90.2%	89.0%	81.2%	81.4%
Kansas	83.3%	83.0%	86.0%	88.3%	84.8%	77.6%	75.2%	69.8%	68.8%	69.4%	70.8%	58.8%	63.7%	N/A
Kentucky	94.0%	96.9%	104.6%	110.6%	101.8%	94.4%	88.3%	82.8%	76.2%	69.7%	67.8%	63.8%	58.2%	54.3%
Louisiana	68.4%	72.6%	75.3%	79.0%	78.3%	73.6%	68.4%	62.7%	64.2%	67.1%	70.4%	69.6%	60.0%	55.9%
Maine	<b>63.1%</b>	<b>68.7%</b>	<b>74.8%</b>	<b>79.5%</b>	<b>78.4%</b>	<b>77.0%</b>	<b>74.4%</b>	<b>74.8%</b>	<b>76.0%</b>	<b>77.1%</b>	<b>79.7%</b>	<b>79.7%</b>	<b>72.6%</b>	<b>70.4%</b>
Maryland	86.0%	90.3%	96.7%	100.8%	97.9%	94.4%	92.9%	91.8%	87.9%	82.5%	80.1%	78.4%	64.9%	64.0%
Massachusetts	81.0%	81.0%	87.3%	84.0%	83.1%	70.4%	74.7%	73.1%	72.3%	75.8%	79.2%	63.0%	67.8%	67.8%
Michigan	102.7%	99.1%	101.1%	101.6%	99.1%	93.3%	87.4%	84.2%	79.7%	87.1%	88.3%	83.6%	80.4%	N/A
Minnesota	101.2%	102.8%	101.5%	102.1%	101.4%	96.8%	92.3%	90.6%	87.5%	84.8%	81.9%	81.4%	72.8%	75.7%
Mississippi	79.5%	84.5%	82.4%	82.4%	87.4%	83.2%	78.8%	74.7%	72.2%	73.3%	73.5%	72.8%	67.2%	64.2%
Missouri	95.5%	96.4%	98.5%	100.3%	97.1%	93.0%	81.9%	81.1%	81.5%	81.6%	83.2%	82.9%	78.3%	76.2%
Montana	79.3%	83.0%	83.0%	102.5%	102.5%	90.8%	90.8%	79.7%	77.7%	80.5%	84.1%	83.9%	74.3%	70.0%
Nebraska	100.5%	106.7%	86.9%	91.4%	90.1%	96.0%	92.1%	88.9%	87.6%	88.7%	92.1%	91.5%	87.6%	N/A

State	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010*
<b>New Hampshire</b>	89.2%	107.0%	89.4%	89.9%	85.0%	82.1%	75.0%	71.3%	60.5%	61.6%	67.2%	68.0%	58.3%	58.5%
<b>New Jersey</b>	102.4%	105.7%	109.7%	111.4%	109.2%	101.4%	93.5%	87.2%	81.6%	77.5%	76.0%	72.6%	62.0%	62.3%
<b>New Mexico</b>	82.0%	84.4%	90.1%	96.0%	98.7%	97.7%	92.2%	87.3%	83.8%	81.9%	81.5%	82.7%	76.2%	72.4%
<b>New York</b>	114.1%	127.5%	128.2%	122.1%	121.9%	120.4%	99.4%	101.0%	103.1%	104.3%	105.9%	107.4%	95.2%	N/A
<b>North Carolina</b>	98.9%	103.6%	107.7%	109.7%	108.8%	106.4%	106.0%	106.0%	104.8%	104.2%	103.4%	99.3%	96.7%	N/A
<b>North Dakota</b>	100.1%	98.6%	97.0%	107.6%	102.6%	97.2%	90.9%	86.5%	82.0%	81.5%	85.7%	87.0%	81.5%	72.4%
<b>Ohio**</b>	88.8%	92.4%	94.1%	96.1%	96.2%	81.2%	79.2%	80.6%	79.4%	80.4%	86.8%	78.3%	N/A	N/A
<b>Oklahoma</b>	57.8%	63.9%	65.3%	69.5%	67.4%	65.9%	66.4%	60.6%	60.5%	59.6%	62.0%	60.7%	64.0%	62.6%
<b>Oregon</b>	93.3%	93.3%	98.8%	97.6%	106.8%	91.0%	97.0%	96.2%	104.2%	110.5%	112.2%	80.2%	85.8%	N/A
<b>Pennsylvania</b>	105.8%	111.3%	120.6%	126.7%	115.0%	105.6%	99.7%	92.8%	86.6%	84.9%	89.5%	87.0%	80.8%	N/A
<b>Rhode Island</b>	75.3%	77.9%	83.0%	81.0%	77.6%	72.6%	63.9%	59.5%	55.9%	53.7%	56.4%	61.1%	61.8%	N/A
<b>South Carolina</b>	91.0%	93.5%	98.2%	89.3%	87.7%	86.3%	83.4%	80.8%	72.9%	71.0%	71.1%	70.1%	68.7%	N/A
<b>South Dakota</b>	95.2%	96.2%	97.4%	96.4%	96.8%	96.9%	97.3%	97.9%	96.8%	97.0%	97.5%	97.4%	91.7%	96.1%
<b>Tennessee</b>	99.1%	99.1%	98.6%	98.6%	98.3%	98.3%	98.6%	98.6%	98.7%	98.7%	95.1%	95.1%	89.9%	N/A
<b>Texas</b>	100.0%	104.5%	103.6%	107.0%	102.8%	97.2%	94.9%	92.7%	88.3%	88.5%	90.1%	90.7%	84.5%	83.4%
<b>Utah</b>	91.0%	95.5%	102.9%	104.7%	102.7%	92.8%	94.7%	92.4%	93.2%	95.8%	96.0%	84.1%	86.6%	85.7%
<b>Vermont</b>	86.0%	89.7%	91.1%	91.9%	92.2%	94.1%	93.8%	94.3%	94.8%	92.0%	95.6%	87.8%	72.8%	74.6%
<b>Virginia</b>	79.4%	87.4%	94.4%	103.6%	106.0%	100.4%	95.2%	89.3%	80.8%	80.2%	81.8%	83.5%	80.1%	N/A
<b>Washington</b>	N/A	113.4%	120.5%	125.9%	124.3%	116.3%	105.7%	104.1%	97.6%	99.6%	99.2%	100.3%	92.2%	N/A
<b>West Virginia</b>	N/A	46.3%	45.9%	47.0%	44.3%	39.7%	38.7%	43.4%	48.6%	54.7%	70.4%	63.6%	55.9%	N/A
<b>Wisconsin</b>	94.7%	95.1%	95.8%	96.0%	96.5%	97.1%	99.2%	99.4%	99.5%	99.6%	99.6%	99.7%	99.8%	N/A
<b>Wyoming</b>	N/A	N/A	N/A	115.3%	103.0%	92.4%	92.5%	86.1%	95.1%	94.9%	94.5%	79.3%	79.3%	88.8%
<b>National AVG</b>	90.6%	93.0%	95.1%	97.7%	95.3%	89.6%	85.9%	83.7%	81.8%	82.0%	83.5%	80.6%	75.3%	71.9%

Notes: Data is aggregated for states with more than one pension plan. N/A stands for "Missing Data".

1997 to 2008 Data was compiled by the Pew Center on the States; 2009 and 2010 was compiled by the Author

\* No Actuarial Valuation was conducted for any CT plans in 2009. 2009 figure is an average of the 2008 and 2010 data

\*\* Ohio's 2008 data was compiled by the author

of the fiscal year. Data was organized based on the year of the actuarial valuation, rather than the year the data was reported. That is why there are so many more non-reporting states for FY2010. You can look for many of these systems to release FY2010 pension data in the fall of 2011 – a year and a half after the actuarial snapshot was taken.

The author of this section used the actuarial value of assets and liabilities, rather than the market value of assets. GASB 25 only requires reporting of actuarial assets and liabilities. The actuarial process “smoothes” market fluctuations in order to reduce volatility in determining annual required contributions. The actuarial values are the most commonly cited statistics in the literature. Due to the smoothing process, where market gains or losses are phased in over a period of usually three years, the impact of the market performance is muted in the 2009 and 2010 actuarial values than if market values were observed.

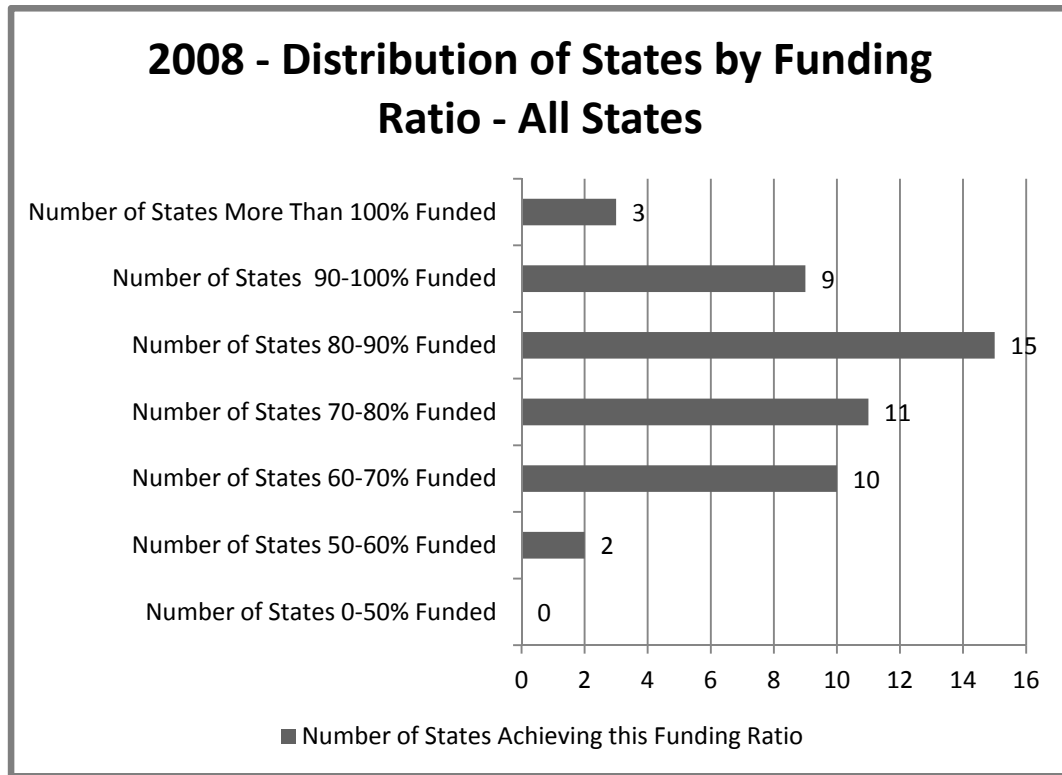
### *Analysis*

On the preceding page Table 8 shows the funded status of state pension systems from 1997 through 2008. Because most recent analyses consider pension funding as of 2009 and later, let us begin there. A review of the data in the table shows a sharp drop in funding ratios for 2009, which reflects the significant impact of market losses on most systems’ investments. Review of the 2010 ratios shows that the effects of the Great Depression lingered and in some cases further eroded pension system assets.

- In 2009 there were only 19 states with a funding ratio of 80% or better and no state is overfunded.
- The national average for funding ratio dropped nearly 5 points to 75.3% from 2008 to 2009.

- Maine's funded ratio fell nearly 7 points to 72.6% between 2008 and 2009, then fell again in 2010 to 70.4%--its lowest point since 1998.

**Figure 6: Distribution of States by Funding Ratio – All States**



**Figure 7: 2009 Distribution of States by Funding Level**

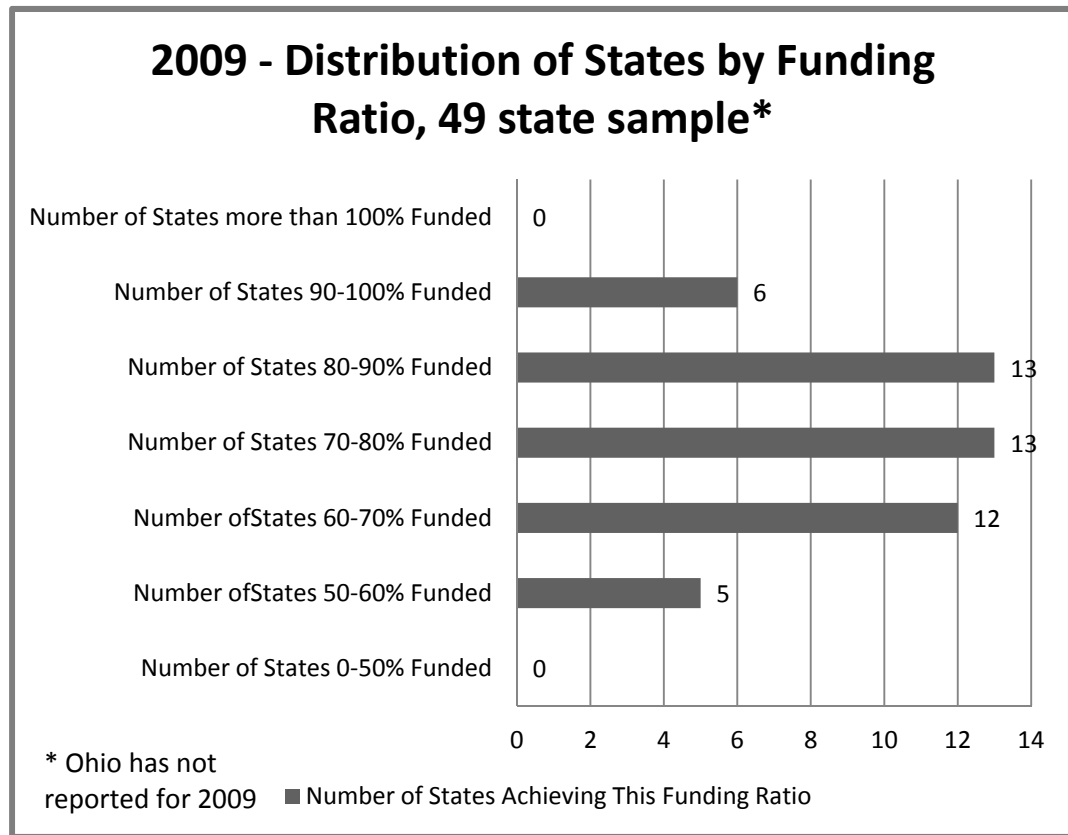
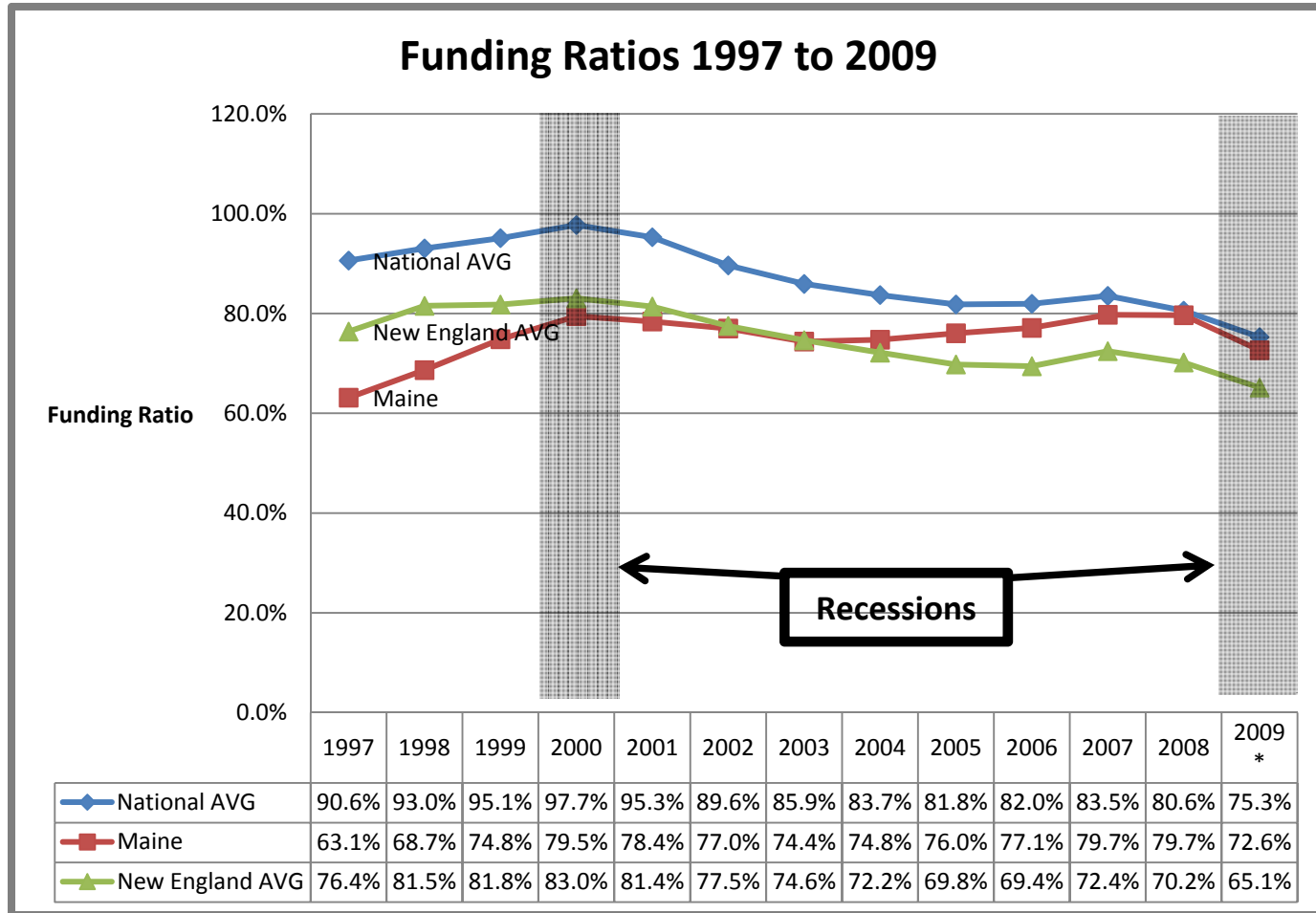




Figure 8 Funding Ratios 1997 to 2009



Tables 9 and 10 illustrate the distribution of states according to the level of their funding ratio in 2008 and in 2009. Looking at the change from 2008 to 2009 shows how the onset of the Great Recession began to impact overall funding levels. In 2009, no state is fully funded, all states have less than a 100 percent funding ratio, despite three states being over the 100% threshold in 2008. In 2009, nineteen states are better than 80% funded; the mark considered being healthy by the GAO. (GAO2007) Twenty-seven states were above the 80% mark in 2008.

**Table 9 Funding Ratio Changes 1997 to 2009**

	Funding Ratios - 1997 to 2009		
	Ratio		Percent Change
	1997	2009	1997 to 2009
Maine	63.13%	72.64%	13.1%
Nat'l Avg	90.61%	75.3%	-20.4%
New Eng. Avg.	76.4%	65.1%	-17.3%

This table isolates the beginning and end years of data to show progress over time. This highlights the progress of the state of Maine to improve its funding status over the period and the degradation that went on in the region and in the nation. Maine improved its funding ratio 13.1% from 1997 to 2009. Meanwhile, the national average was down 20.4% and the New England average was down 17.3%.

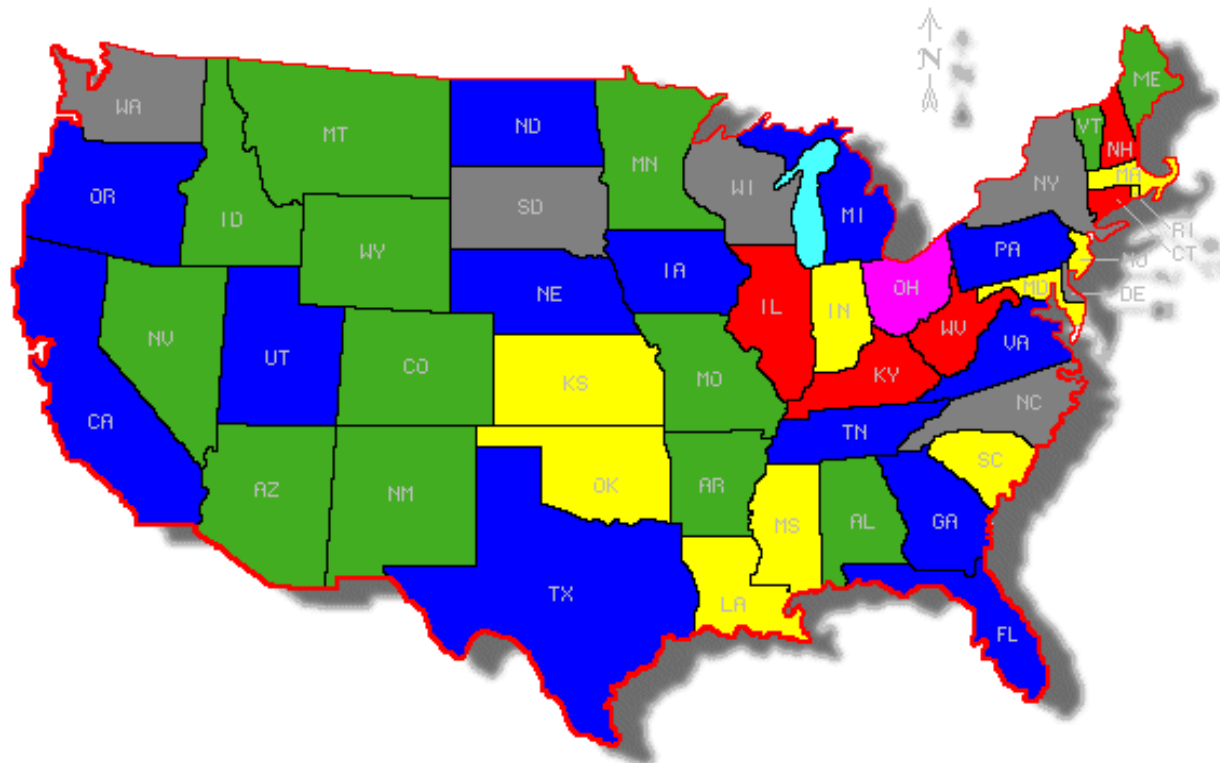
**Table 10 Funding Ratio Changes 2008 to 2009**

	Funding Ratios - 2008 to 2009		
	Ratio		Percent Change
	2008	2009	2008 to 2009
Maine	79.65%	72.64%	-9.7%
Nat'l Avg.	80.58%	72.8%	-10.6%
New Eng. Avg.	70.2%	65.1%	-7.7%

**Figure 9**

Pension System Funding Ratios - 2009

- - 50% to 60% Funded
- - 60% to 70% Funded
- - 70% to 80% Funded
- - 80% to 90% Funded
- - 90% to 100% Funded
- - Not Reporting



6-13-11

The preceding table considered a shorter time frame: 2008 to 2009. This time period captures the sudden drop off in investment due to market losses from the Great Recession. Maine's drop off in funding ratio as a percentage was not as severe as the national mark, but somewhat worse than the New England Average.

**Table 11: Funding Ratio Changes 2009 to 2010**

	Funding Ratios - 2009 to 2010		
	Ratio		Percent Change
	2009	2010	2009 to 2010
Maine	72.64%	70.38%	-3.2%
Nat'l Avg.	75.3%	71.9%	-4.6%
New Eng. Avg.	65.1%	64.9%	-0.3%

The above table is based upon incomplete data, but it can be informative. The 2010 data only reflects ratios from 28 states for the national figure and it does not include Rhode Island in the New England average. However, the general trend is that after the big drop in funding ratios from 2008 to 2009, as seen above, the worst may be over for 2010.

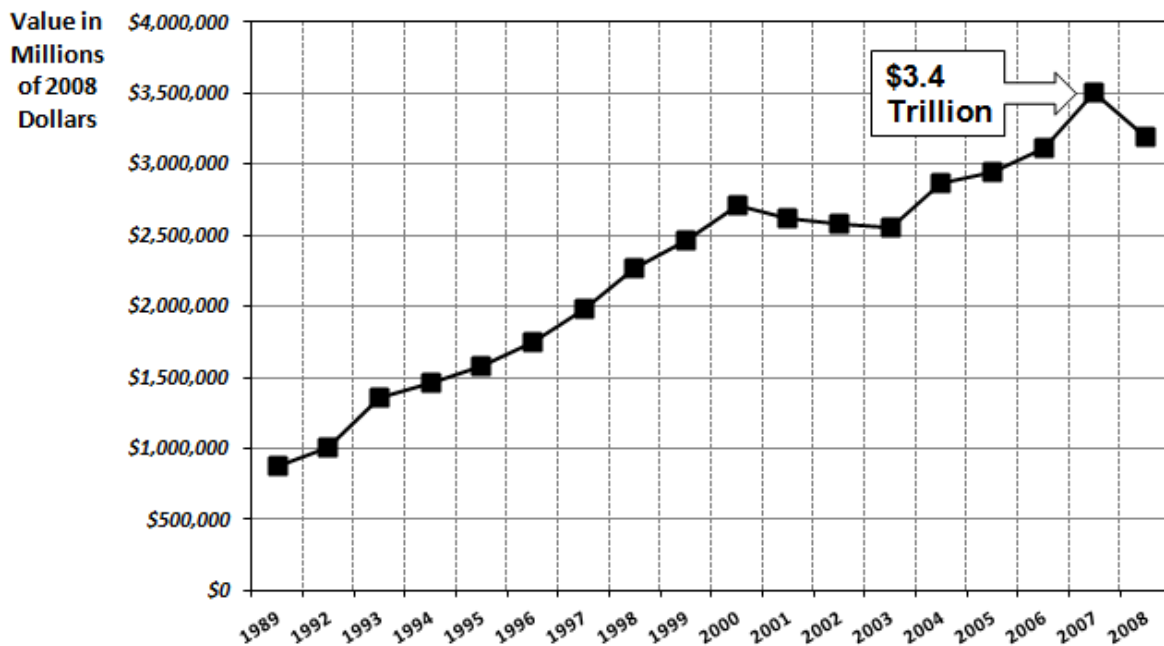
During 2010, investment losses began to be recouped nationwide. However, pension systems employ a method known as “actuarial smoothing.” This refers to the process of phasing in market gains and losses over a number of years. This typically prevents the “annual required contribution” (ARC) from fluctuating widely from year-to-year and increases predictability for state budget writers. However, it also means that the pain of the Great Recession will be phased in over a number of years, even as equity markets level and climb. Since the unusually large reduction in covered obligations that accompanied the Great Recession may prove to have been transitory, systems may choose to restart calculations rather than using recession years in smoothing formulas.

### *A Longer View on Pension Funding Progress*

Looking back, before the onset of the recession, we see that there was evidence of strong improvement in many states. Although the expected rates of return used by states have been criticized as being too optimistic, with the growth rates of the 1990s characterized as “never to be seen again,” returns on investment during the mid-2000s were very strong, as the following graph reflects. In inflation-adjusted dollars, holdings of all US retirement systems tracked by the US Bureau of the Census increased dramatically between 1989 and 2009, more than tripling in value over the twenty year period. While holdings include employer and employee contributions, the major portion of growth observed is attributable to investment gains.

**Figure 10**

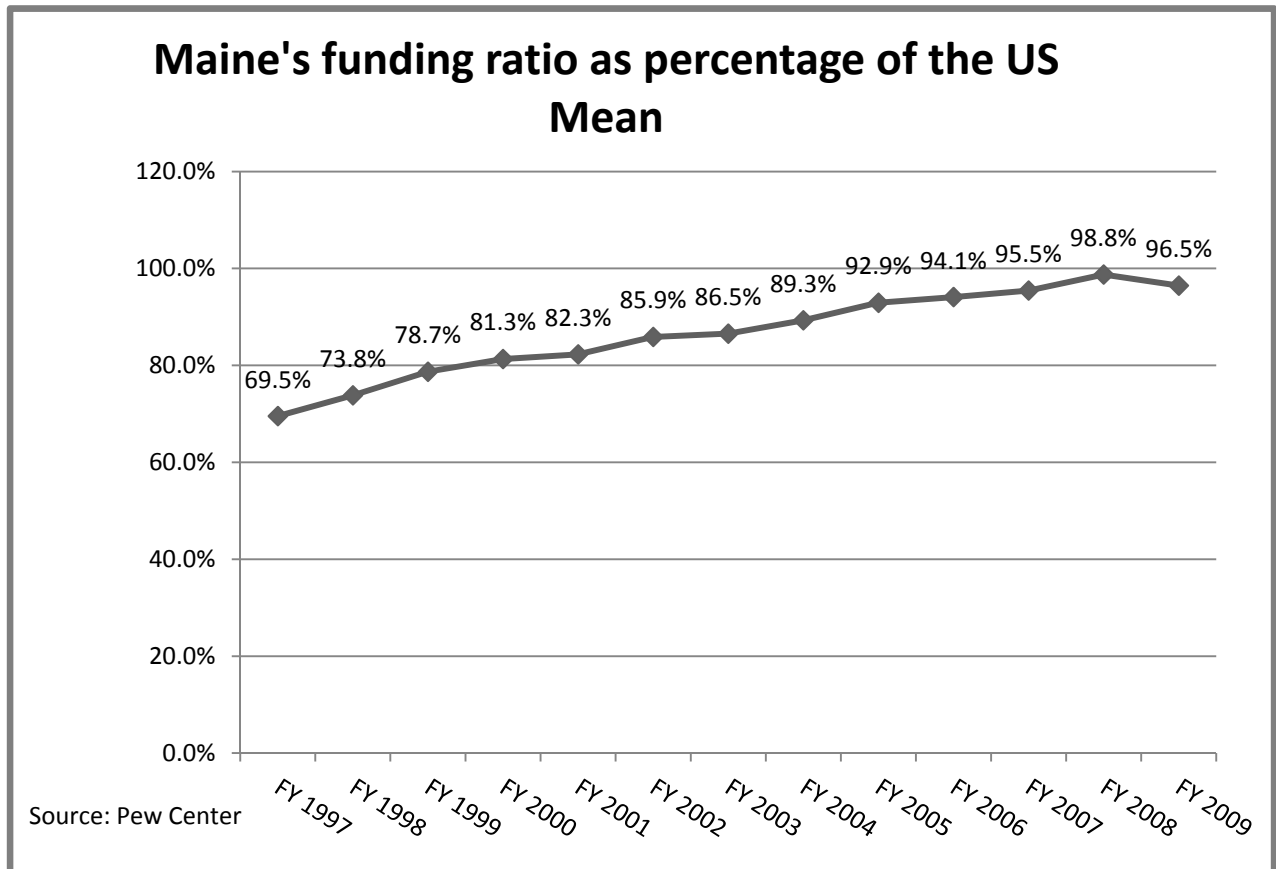
#### **Cash and Security Holdings in State and Local Government Pension Systems in Inflation Adjusted 2008 Dollars, 1989 -2008<sup>1</sup>**



<sup>1</sup> Deflated using CPI. Source: U.S. Census Bureau, State and Local Public Retirement Systems, [www.census.gov/govs/retire](http://www.census.gov/govs/retire); various years.

A review of trends shown earlier in Table 8 reveal that by 2008 there were 27 states with a funding ratio of 80% or better and 3 states that had ratios above 100%. On the next page and using the same data, Figure 11 tracks Maine's funding ratio as a percent of the mean.

**Figure 11: Maine's Funding Ratio as a percent of the US Mean**



This graph illustrates the change in funding status over time using the data from the Pew Center between 1997 and 2008 and the author's research on funding status for 2009. This shows that Maine started well below the national and regional funding levels, but steadily made progress until the market downturn in 2009. Reaching a high of 98.8% of the US mean funding level, Maine has made continued and steady progress in this metric. Over the time period data was collected for the only year Maine lost ground was from 2008 to 2009. When this data is

compared to above data, we can see that as Maine's funding ratio crept upwards, the national mean was slipping, so this is consistent.

**Figure 12: Comparison of Maine UAL to New England and Nation**

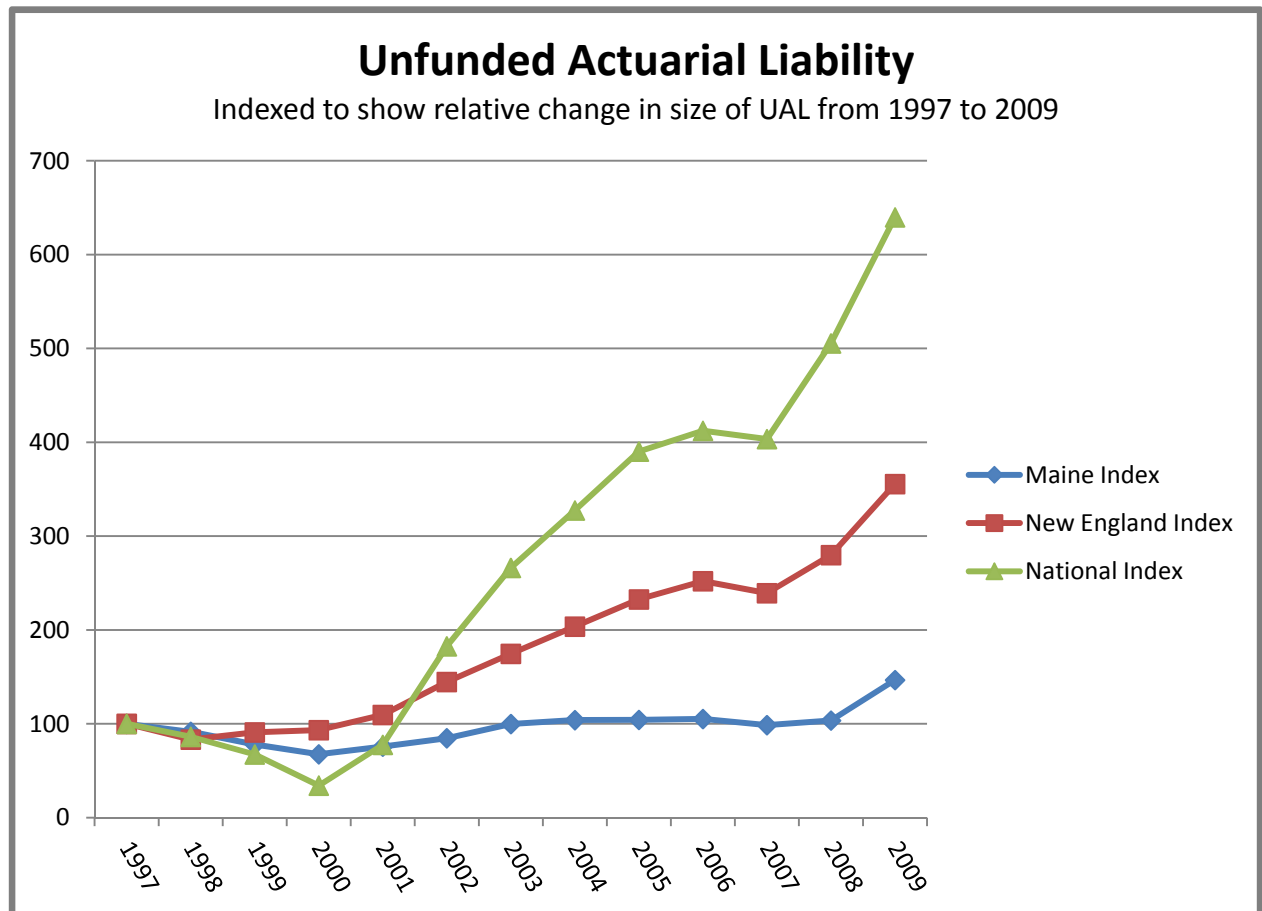


Figure 12 uses a technique known as indexing as a way to compare changes in the size of the Unfunded Actuarial Liability (UAL) over a period of time. By creating a common starting point we can track the changes in the relative size of UALs against one another. We can see that Maine did not shrink the size of the UAL by any great measure between 1997 and 2008 and it ticked upward demonstrably in 2009. However, the state's position should be considered against the explosive growth of UAL's nationally and in New England in the period from 2001 to 2009. By keeping relatively flat growth, Maine has bucked a national trend. Recovery of investment

value as the economy recovers should help Maine to achieve the 80% funded level recommended by the Government Finance Officers Association.

## **6.2 Financial Performance Ratios**

Another means used to track pension system financial performance is to compute ratios based on contributions to the system, disbursements (which include withdrawals by people leaving the system, payment to beneficiaries, and system operating costs), and earnings on investments. This section of the financial analysis focuses on three key ratios:

The ratios were computed using data collected by the US Census Bureau, whose analysts compile data on hundreds of pension systems in the states. Some states will have dozens of municipalities each responsible for managing public employee pension systems, while Maine operates a single, unified system. In states where multiple pensions systems exist, the data is aggregated by the Census Bureau to show a state total. The Census data was compiled by Professor Josie LaPlante; ratios for 1980-1989 appear in her report to the State: *Dollars and Sense: Maine State Budgeting at a Crossroads*. The ratios were updated by her for more recent years. I used her database to analyze trends. Table 12 shows trends in each of the three ratios.

### **Receipts to Disbursement Ratios**

Pension systems are funded through two primary means; payroll contributions from employees and employers and through investment earnings of those contributions. Those two sources are required to fund the disbursement of pensions to qualified persons. The first ratio, cash receipts as a proportion of cash disbursements, measures the degree to which cash inflows from contributions and investment earnings exceed cash outflows. The data from the Census Bureau shows that the systems assets and earnings to disbursement ratios have steadily increased since the early 1990s. However, also see that the Maine State Retirement System is highly



**Table 12: Comparative View of Maine's Public Employee Retirement System's Financial Performance, 1982 - 2008**

	<b>Comparison Indicators</b>	<b>Ratio of Receipts to Disbursements</b>	<b>Ranking Among States</b>	<b>Ratio of Earnings to Disbursements</b>	<b>Ranking Among States</b>	<b>Ratio of System Assets to Disbursements</b>	<b>Ranking Among States</b>
<b>1982</b>	Maine	<b>1.64</b>		<b>0.41</b>		<b>3.68</b>	
	Mean of States	<b>2.78</b>		<b>0.992</b>		<b>14.11</b>	
	Maine as % Mean	<b>59%</b>		<b>41%</b>		<b>26%</b>	
<b>1989</b>	Maine	<b>2.46</b>	<b>40</b>	<b>0.89</b>	<b>45</b>	<b>9.64</b>	<b>47</b>
	MEAN of States	3.07		1.68		19.36	
	Maine as % Mean	<b>80%</b>		<b>53%</b>		<b>50%</b>	
<b>1992</b>	Maine	<b>1.81</b>	<b>47</b>	<b>0.64</b>	<b>48</b>	<b>9.56</b>	<b>49</b>
	MEAN	3.03		1.80		18.96	
	Maine as % Mean	<b>60%</b>		<b>36%</b>		<b>50%</b>	
<b>1993</b>	Maine	<b>1.96</b>	<b>41</b>	<b>0.61</b>	<b>45</b>	<b>10.00</b>	<b>47</b>
	MEAN	2.72		1.54		19.17	
	Maine as % Mean	72%		40%		52%	
<b>1994</b>	Maine	<b>1.99</b>	<b>42</b>	<b>0.89</b>	<b>45</b>	<b>7.16</b>	<b>49</b>
	MEAN	2.60		1.54		17.54	
	Maine as % Mean	<b>77%</b>		<b>58%</b>		<b>41%</b>	
<b>1995</b>	Maine	<b>1.78</b>	<b>43</b>	<b>0.58</b>	<b>47</b>	<b>9.40</b>	<b>49</b>
	MEAN	2.47		1.40		19.02	
	Maine as % Mean	74%		42%		50%	
<b>1996</b>	Maine	<b>2.186</b>	<b>40</b>	<b>1.000</b>	<b>44</b>	<b>10.31</b>	<b>48</b>
	MEAN	2.97		1.96		19.50	
	Maine as % Mean	<b>74%</b>		<b>51%</b>		<b>53%</b>	
<b>1997</b>	Maine	<b>3.89</b>	<b>15</b>	<b>2.72</b>	<b>16</b>	<b>10.93</b>	<b>49</b>
	MEAN	3.26		2.25		21.19	
	Maine as % Mean	<b>119%</b>		<b>121%</b>		<b>52%</b>	
<b>1998</b>	Maine	<b>4.01</b>	<b>18</b>	<b>2.83</b>	<b>18</b>	<b>19.02</b>	<b>33</b>
	MEAN	3.51		2.59		22.99	
	Maine as % Mean	114%		110%		83%	
<b>1999</b>	Maine	<b>3.24</b>	<b>22</b>	<b>2.04</b>	<b>27</b>	<b>20.00</b>	<b>33</b>
	MEAN	3.14		2.28		23.07	

	Maine as % Mean	103%		89%		87%	
<b>2000</b>	<b>Maine</b>	<b>2.92</b>	<b>29</b>	<b>1.88</b>	<b>37</b>	<b>20.97</b>	<b>31</b>
	MEAN	3.60		2.81		23.74	
	<b>Maine as % Mean</b>	<b>81%</b>		<b>67%</b>		<b>88%</b>	
<b>2001</b>	<b>Maine</b>	<b>-0.48</b>	<b>45</b>	<b>-1.50</b>	<b>50</b>	<b>17.96</b>	<b>37</b>
	MEAN	1.05		0.31		20.98	
	<b>Maine as % Mean</b>	<b>-46%</b>		<b>-486%</b>		<b>86%</b>	
<b>2002</b>	<b>Maine</b>	<b>0.08</b>	<b>23</b>	<b>-1.26</b>	<b>40</b>	<b>16.14</b>	<b>34</b>
	MEAN	-0.06		-0.76		18.88	
	<b>Maine as % Mean</b>	<b>-152%</b>		<b>167%</b>		<b>85%</b>	
<b>2003</b>	<b>Maine</b>	<b>1.84</b>	<b>11</b>	<b>0.84</b>	<b>12</b>	<b>17.38</b>	<b>25</b>
	MEAN	<b>1.22</b>		<b>0.53</b>		<b>17.40</b>	
	<b>Maine as % Mean</b>	<b>151%</b>		<b>158%</b>		<b>100%</b>	
<b>2004</b>	<b>Maine</b>	<b>3.49</b>	<b>17</b>	<b>2.53</b>	<b>19</b>	<b>18.17</b>	<b>23</b>
	MEAN	3.25		2.55		18.35	
	<b>Maine as % Mean</b>	<b>107%</b>		<b>99%</b>		<b>99%</b>	
<b>2005</b>	<b>Maine</b>	<b>2.95</b>	<b>10</b>	<b>2.07</b>	<b>14</b>	<b>18.14</b>	<b>24</b>
	MEAN	2.46		1.78		18.56	
	<b>Maine as % Mean</b>	<b>120%</b>		<b>116%</b>		<b>98%</b>	
<b>2006</b>	<b>Maine</b>	<b>2.40</b>	<b>23</b>	<b>1.51</b>	<b>33</b>	<b>18.26</b>	<b>27</b>
	MEAN	2.49		1.82		18.86	
	<b>Maine as % Mean</b>	<b>97%</b>		<b>83%</b>		<b>97%</b>	
<b>2007</b>	<b>Maine</b>	<b>3.906</b>	<b>14</b>	<b>3.056</b>	<b>17</b>	<b>24.72</b>	<b>9</b>
	MEAN	3.48		2.80		20.31	
	<b>Maine as % Mean</b>	<b>133%</b>		<b>139%</b>		<b>107%</b>	
<b>2008</b>	<b>Maine</b>	<b>0.274</b>	<b>31</b>	<b>-0.502</b>	<b>28</b>	<b>17.57</b>	<b>24</b>
	MEAN	0.46		-0.25		17.60	
	<b>Maine as % Mean</b>	<b>60%</b>		<b>202%</b>		<b>100%</b>	

dependent on the performance of the stock market – more so than other states. The state’s rank for the ratio of receipts to disbursements and ratio for earnings to disbursements and ratio for

assets to disbursements all crept from the bottom rung of the fifty states to the middle or better – except for recessionary periods.

**Figure 13: Trends in the Ratio of Receipts to Disbursements**

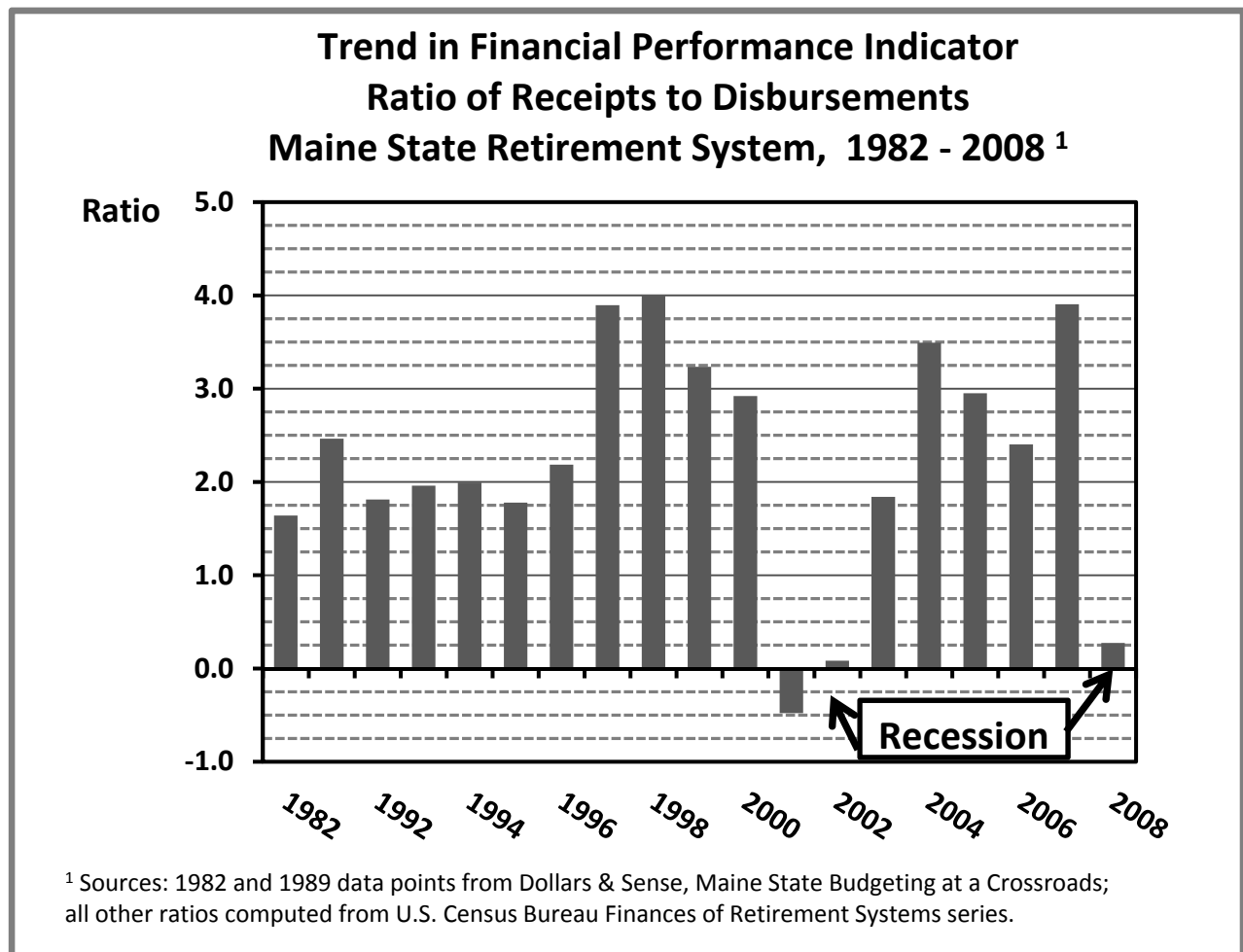


Figure 13 traces the trend in the ratio of receipts to disbursements from 1982 to 2008. A receipt, in this instance, refers to payroll contributions from employees and employers as well as investment earnings. We can see that recessionary periods impact the ratio significantly, falling from highs of nearly 4 to 1 in the best of times to nearly 1 to 1 during recessions. During these recessionary periods either more or essentially the same amount is paid out to qualified pension recipients as is contributed or earned by asset holdings. Generally the ratios are higher post-1996 than in previous years.

Figure 14: Trends in Ratio of Earnings to Disbursements

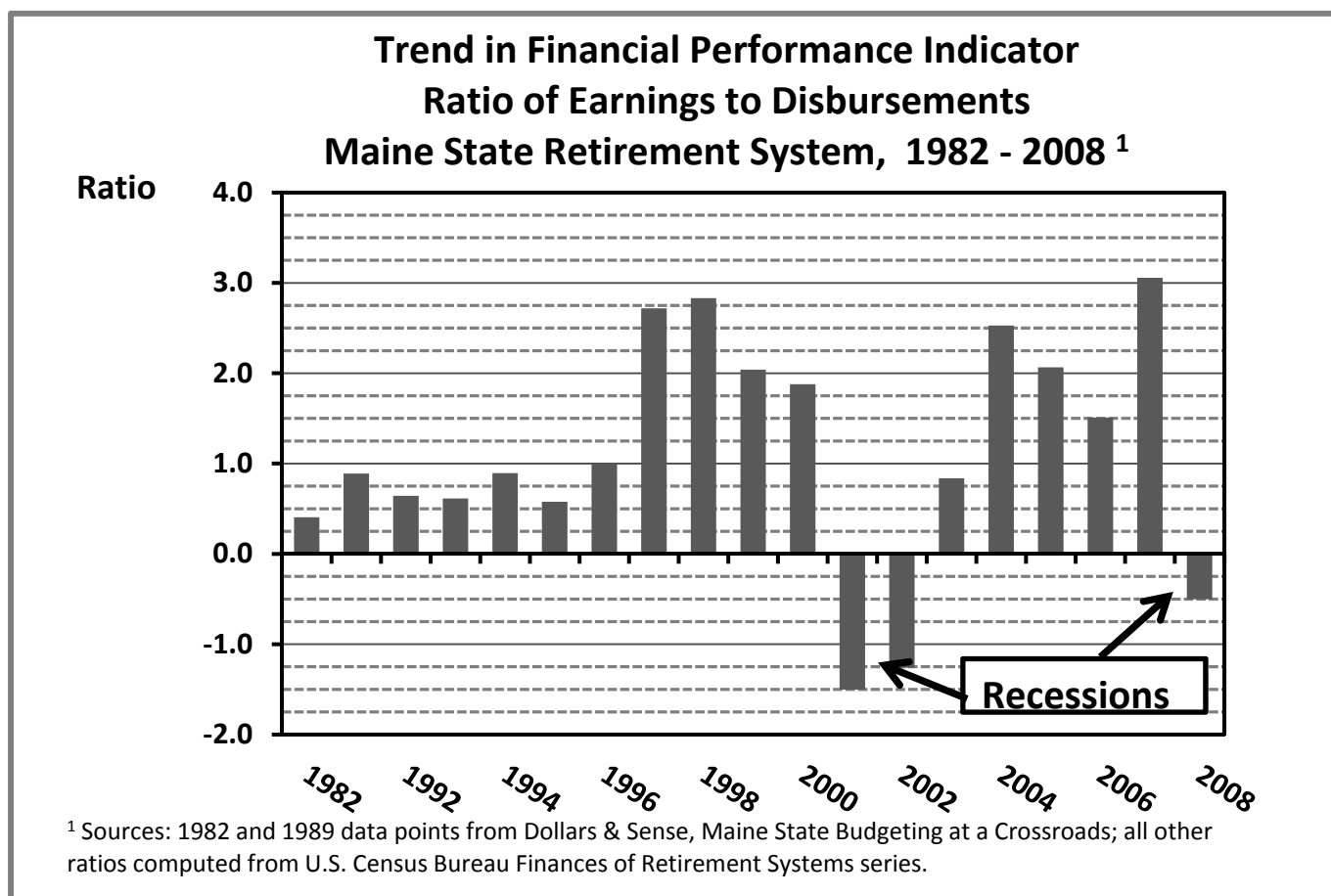


Figure 7 illustrates the trend in the ratio between investment earnings and fund disbursements. As with the prior figure, the economic environment has a major impact on the size of this ratio. Recessionary periods have a major impact on the health of this indicator, showing that in these years more is paid out than is brought in. However, there are many more years of positive growth than negative.

Figure 15: Trends in Ratio of System Holdings to Disbursements

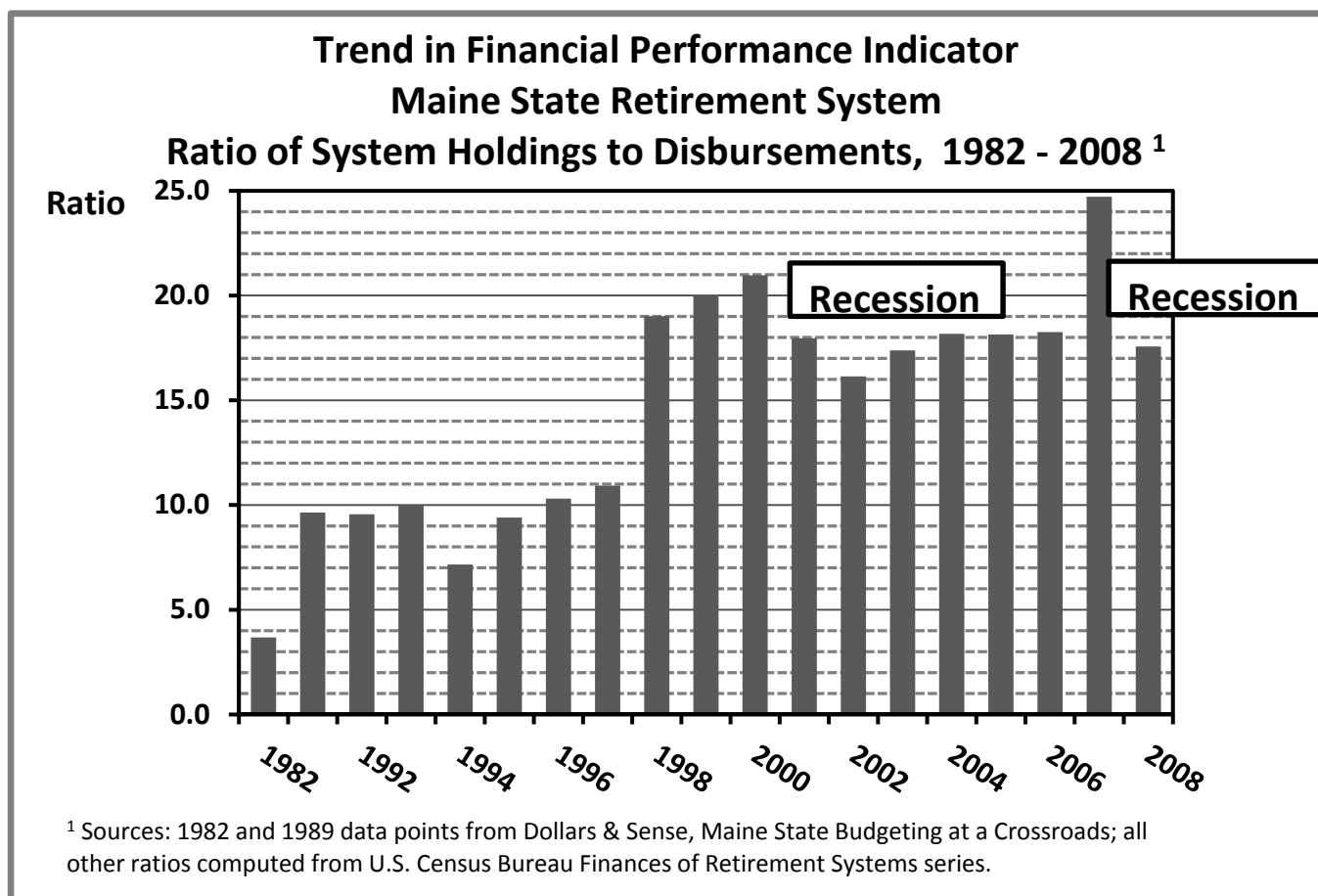


Figure 15 illustrates the overall ratio of system holding to disbursements. As we see here, again the impact of recessionary periods has a major impact on the holdings of the system. While the trend is toward a higher ratio of holdings to disbursements, the recessions of 2001 and 2008 have major impacts. As well, the jump in the size of the ratio between 1998 and 2000 and from 2006 to 2007 indicate a very hot stock market that inflated asset holdings – only to have the air let out when the bubble burst the following year.

Figure 16: Maine's Ranks for Ratio of Receipts to Disbursements, 1992-2008

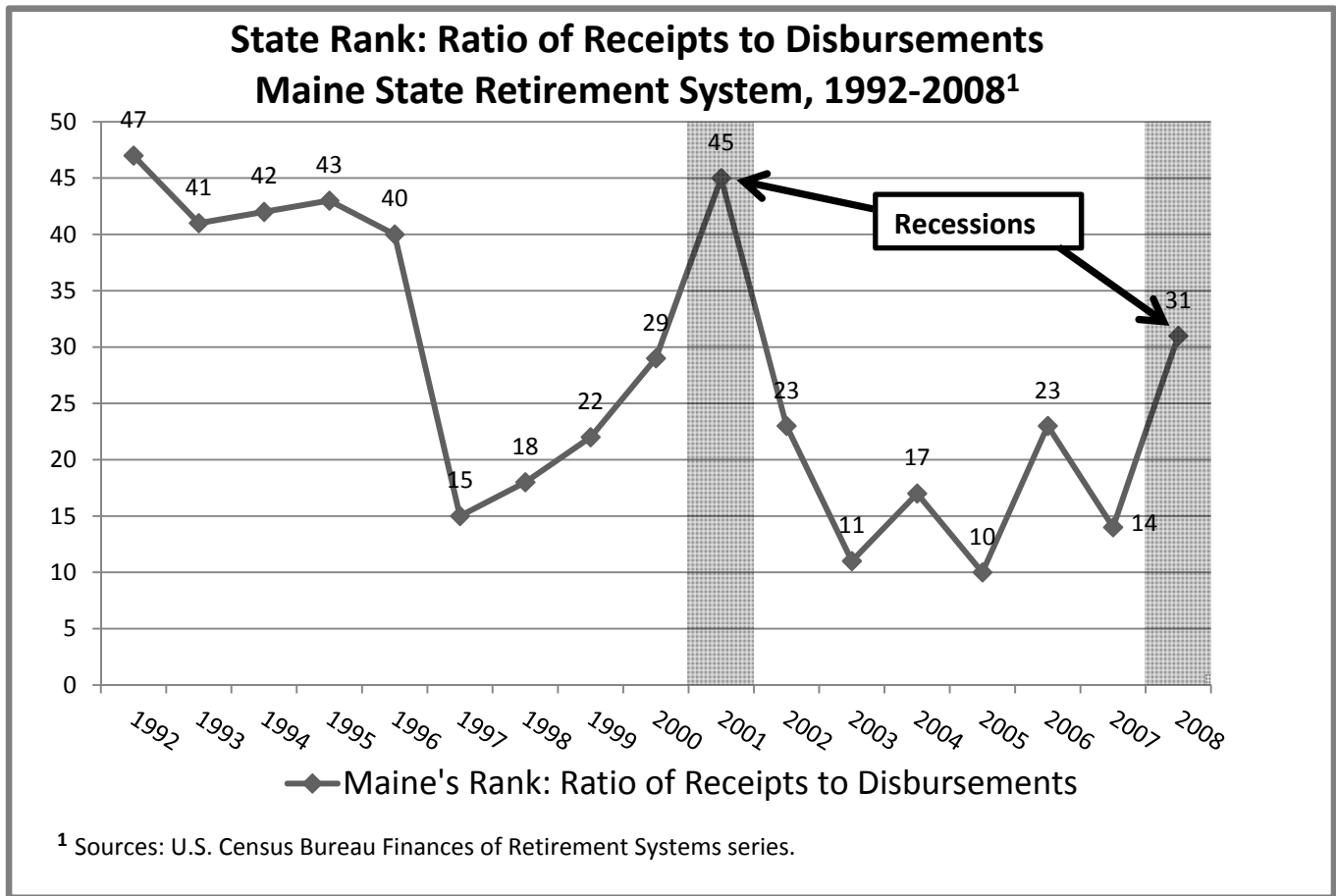
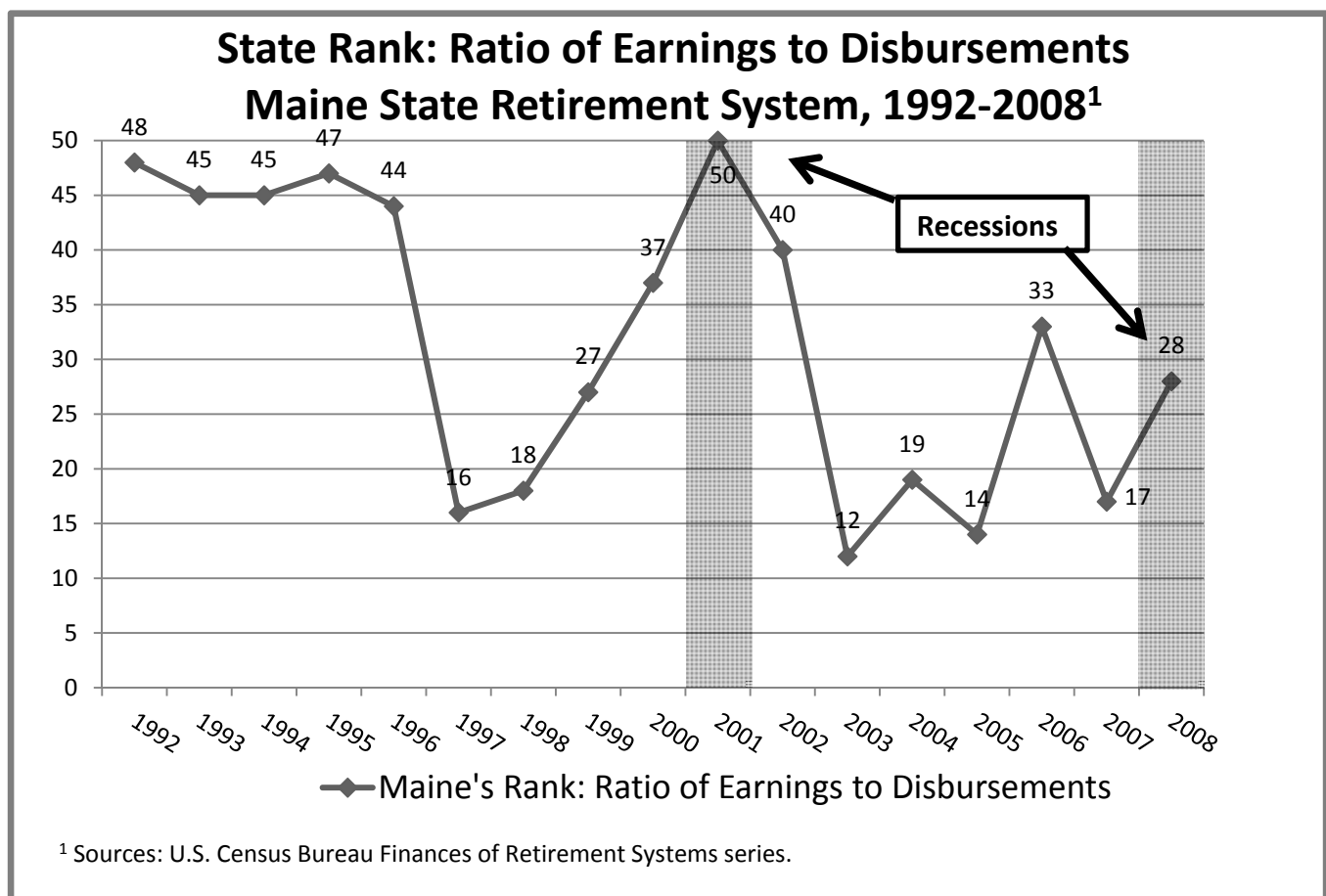


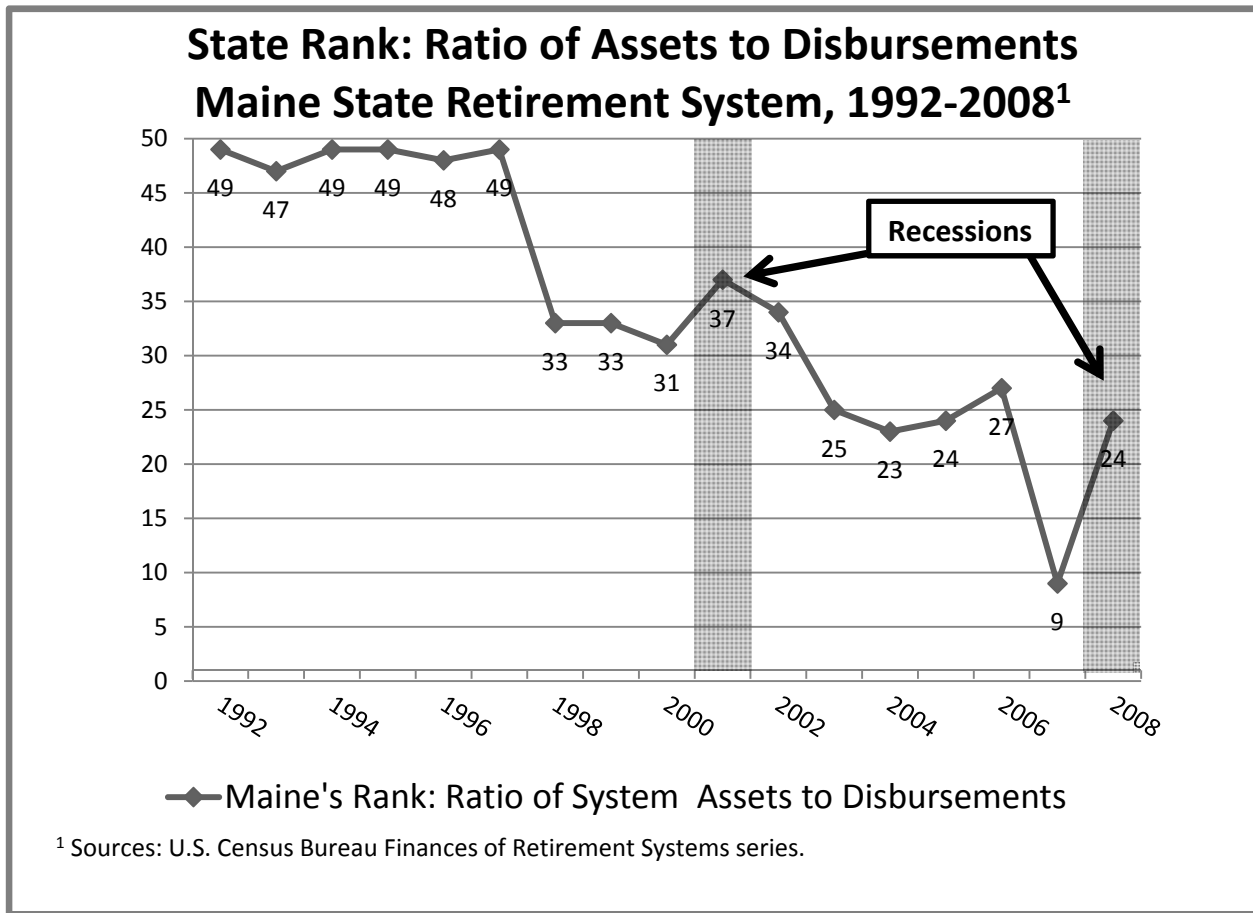
Figure 16 tracks Maine's national ranking for its ratio of receipts to disbursements. Here we notice that the trend has improved since the early 1990's when the Maine Retirement System was routinely in the bottom fifth of states. Above figures illustrated how the ratios dropped significantly during recessions and here we see a similar phenomenon. Not only were the holdings impacted negatively, the state's rank dropped as well. This would indicate that the State is overly reliant on investment earnings than other states.

Figure 17: Maine's Ranks for Ratio of Earnings to Disbursements, 1992-2008



In Figure 17 the ratio of earnings to disbursements is graphed to show Maine's ranking among the states. We see that there is a general trend toward improvement in the state's position from when it was nearly last in the early 1990s to being in the middle from 2003 onward. However, again we see that the state's ranking is hugely impacted by the performance of the stock market. All states rely on earnings to fund their pension systems, so this would call into question why Maine appears to be impacted more than other states.

Figure 18: Maine's Ranks for Ratio of Assets to Disbursements, 1992-2008



The ratio of system assets to disbursements, the amount of money in the fund compared to how much is paid out, is illustrated in figure 18. Again, here we can see that Maine has made steady progress in bolstering the amount of money in the fund compared to the amount that is disbursed as compared to other states. The state has improved its ranking here considerably since the early 1990s. However, yet again this progress is tempered by the fact that the state's ranking is adversely impacted during recessionary periods more than other states. If all states relied on system assets to the extent that Maine does, these rankings would not fluctuate as much as they do.



Figure 19: Comparison of Maine to US Mean, Ratio of Assets to Disbursements, 1992-2008

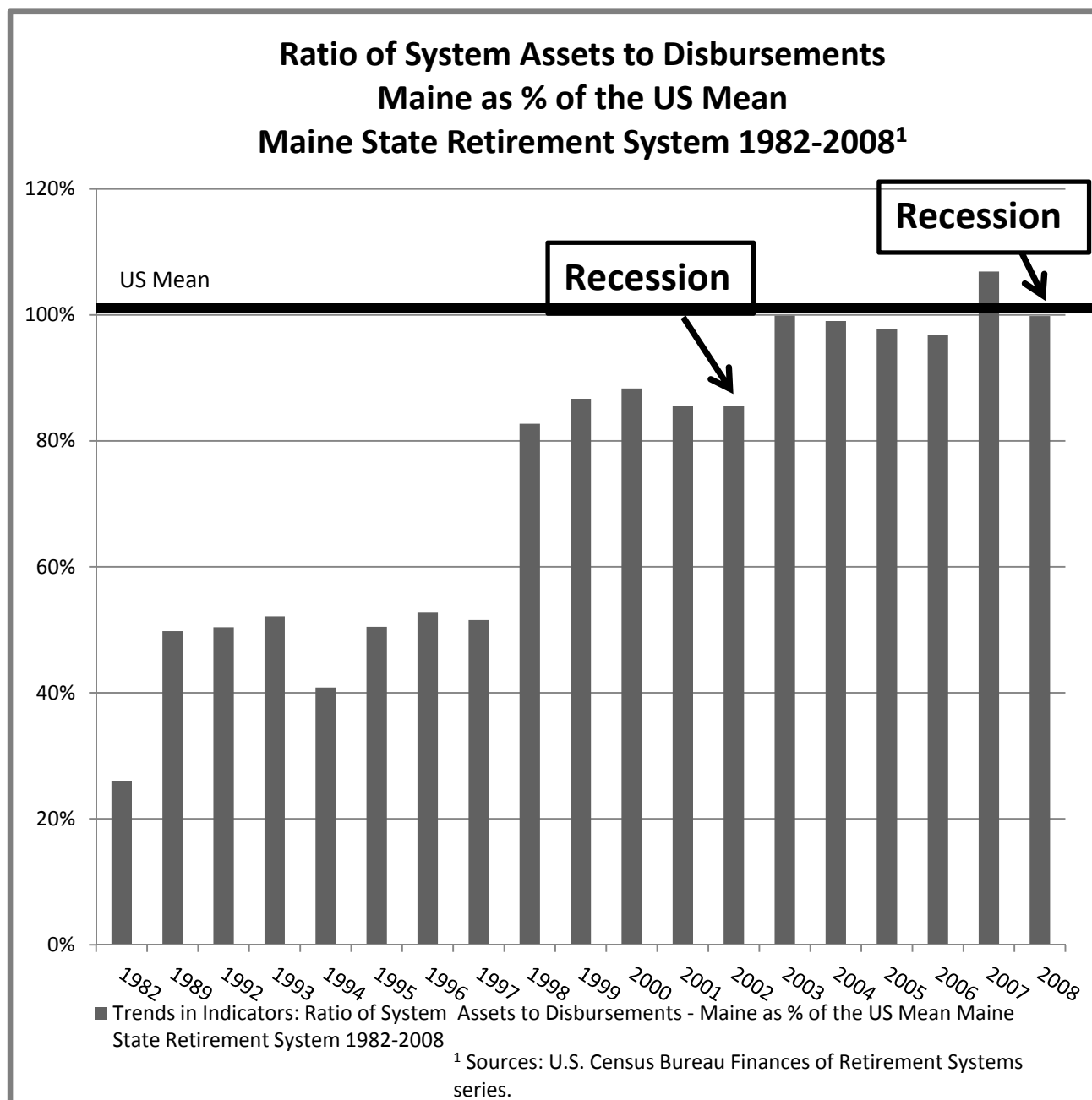


Figure 19 compares Maine's ratio of assets to disbursements as measured as a percent of the national mean - 100% equals the national mean.

**Figure 20: Trends in the Ratio of Assets to Disbursements, Maine Compared with US Mean and Dow Jones Industrial Average, 1992-2008**

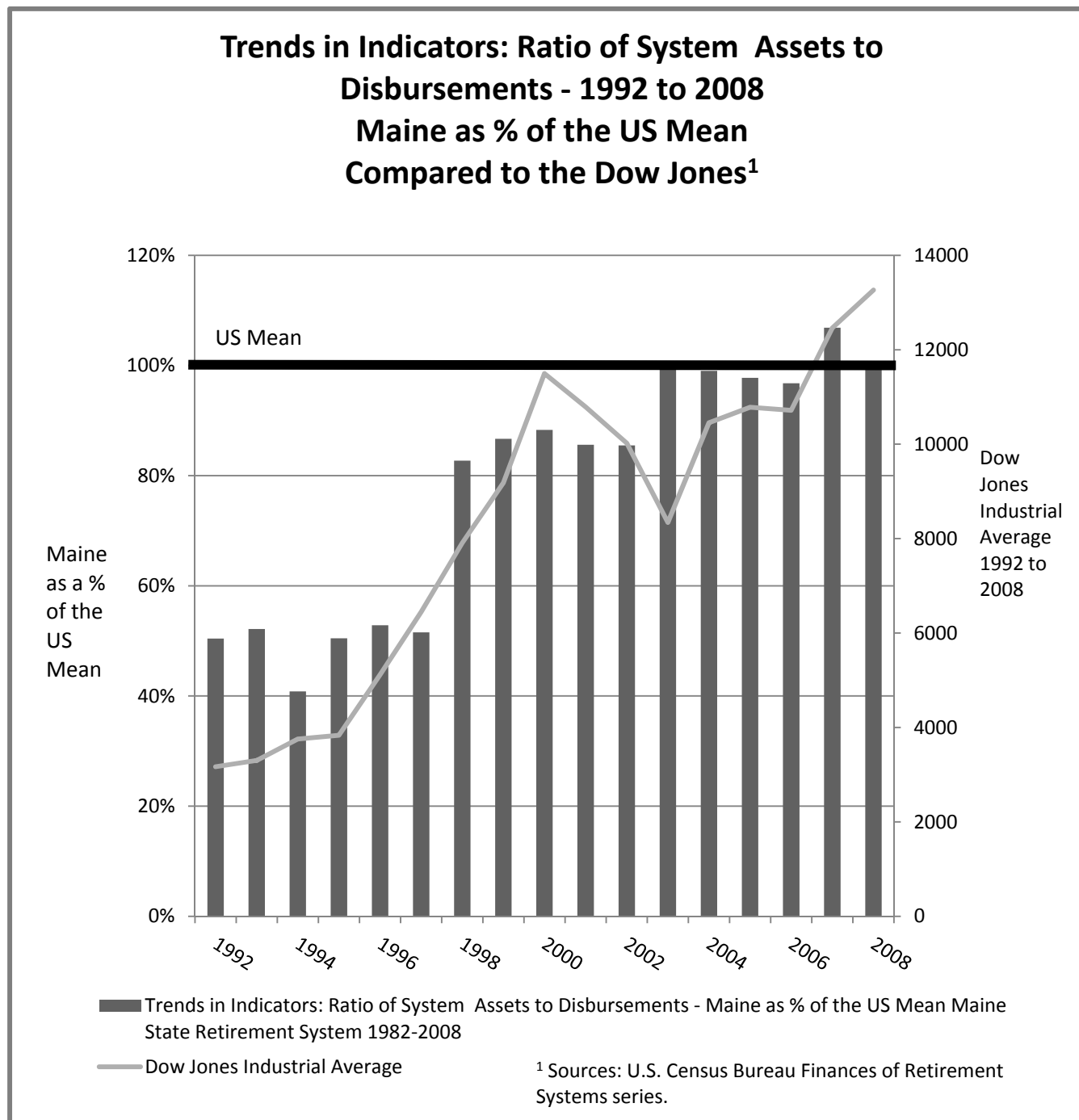


Figure 20 combines two measures as a way to compare the State's progress and the role that the stock market may have on system holdings. The line on the chart in figure 20 is the Dow Jones

Industrial Average. As the state's position improved, moving toward the national mean, we can see that the DJIA climbed as well.

**Figure 21: Trends in the Ratio of Assets to Disbursements, Maine Compared with the Dow Jones Industrial Average, 1992-2008**

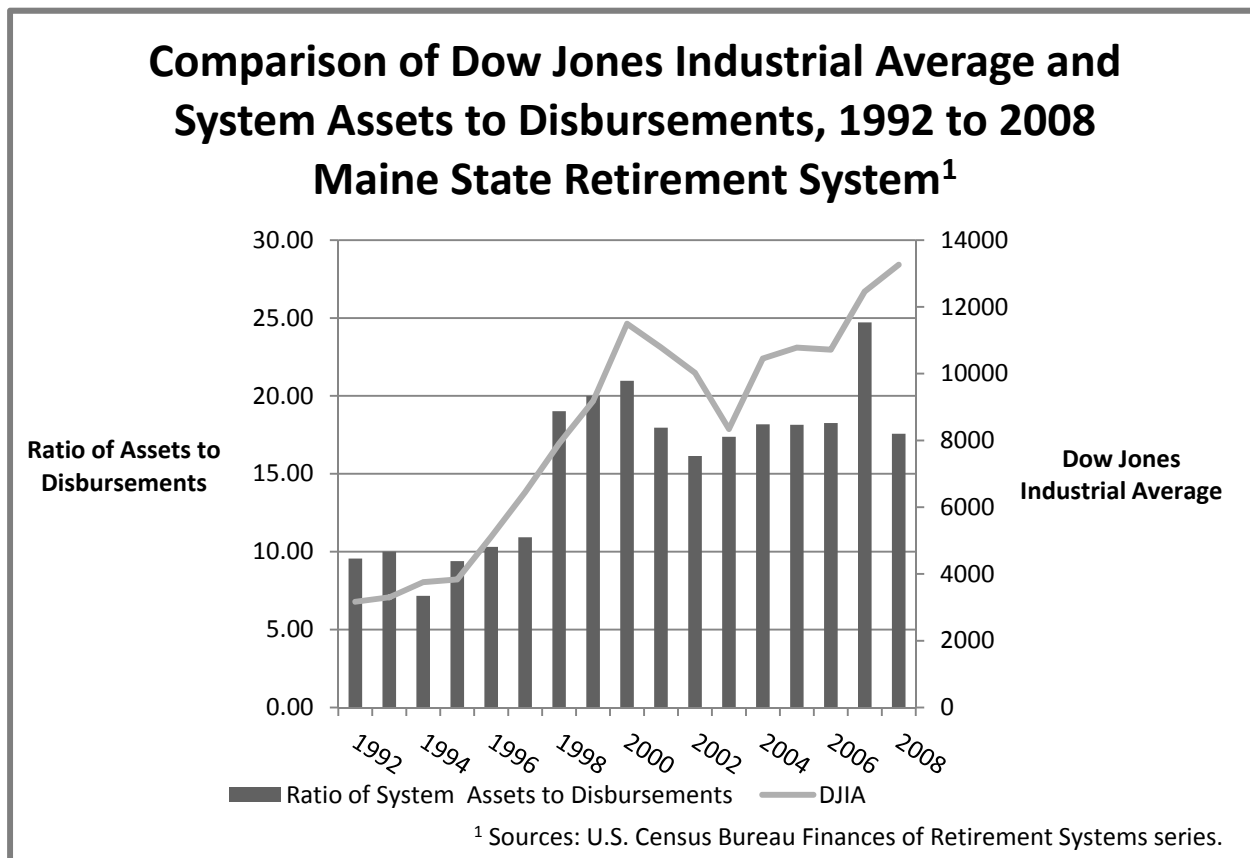


Figure 21 illustrates a comparison of the Dow Jones Industrial Average to the ratio of System Assets to Disbursements of the Maine State Retirement System. Again, this chart helps to visualize the impact of the stock market performance on the holdings of the fund. The fund generally improved its position in terms of holdings to disbursements in line with the performance of the stock market. This comparison also tracks the result in Figures 20.

**Comment by Josie LaPlante:** This excellent graphical analysis reveals quickly that large investment returns during good times have been the State's major means of financing the unfunded pension liability. When the economy has tumbled, as it did in 2001 and 2008, significant system losses occurred. The robustness of the system could be enhanced through a stronger emphasis on the state's annual contribution, in particular, ensuring that substantial contributions are made annually regardless of expected investment gains. The large unfunded liability has accrued because the State of Maine neglected to fund in a timely manner promises made to former and current employees. Solving the financing shortfall is the responsibility of the State, since the State created the problem. Punting this responsibility to the vagaries of the stock market and more recently to employees is hardly fiscally accountable behavior.

## **VII. Trends in State Contributions and the Adequacy of System Assets<sup>1</sup>**

In 1993, writing in *Dollars and Sense: Maine State Budgeting at a Crossroads*, LaPlante admonished the State for failing to finance adequately this important long term financial obligation. "Despite gains during the 1980's, Maine has not 'caught up' [on the unfunded liability]. As of 1990, the unfunded liability hovered above \$1.3 billion, an increase from a level of \$1.2 billion two years before. Deferments of required contributions of more than \$73 million during fiscal years 1991 and 1992 further boosted the long term liability, and additionally, have served to increase the annual costs for years into the future because not only the current dollars deferred but the interest earnings that would have accrued on that investment will need to be made up" (pp. 73). LaPlante concluded her analysis of Maine's Public Employees Retirement System (MainePERS) by urging serious attention to getting the pension system on stronger footing: "As a result of a lack fiscal discipline, financing the state retirement system is nearing a crisis stage that extends well beyond the funding deficit projected for the current budget...Unless a concerted effort is made to payoff what we must in a timely way, our grandchildren could end up paying for benefits that accrued to our parents" (pp. 80).

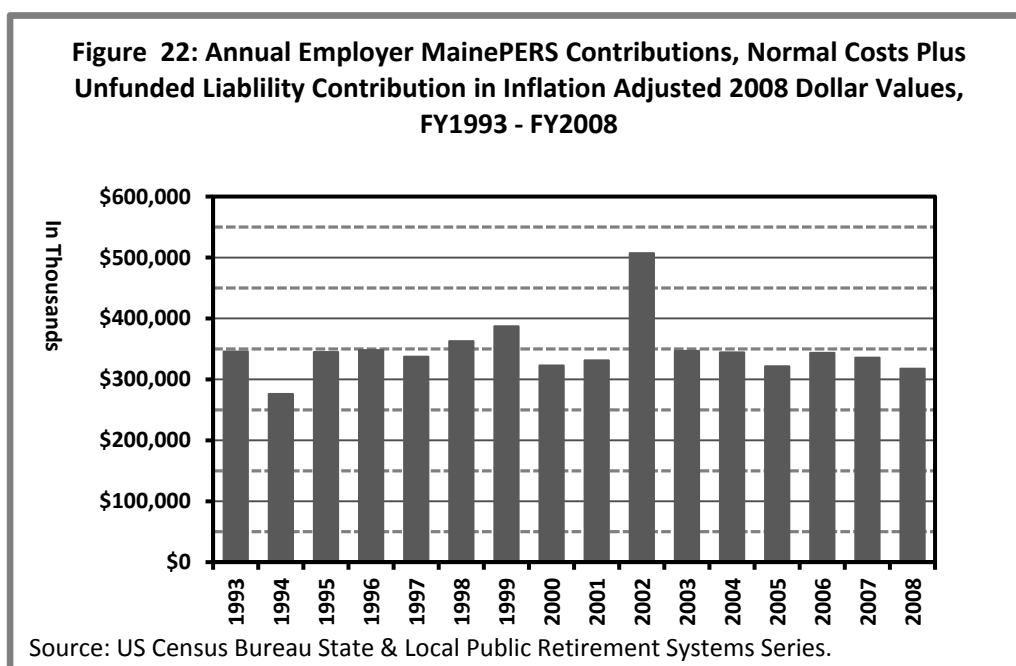
Despite this and other warnings, the State has not been especially proactive in its efforts to retire the unfunded actuarial liability. It is important to note the opportunity cost of MainePERS underfunding, which occurs in the form of foregone investment earnings. Had the unfunded liability been reduced sooner or, even more desirable, had full funding been achieved, the value of System assets available for investment would have been much greater than what has actually been available through lower ARC payments. Earnings on investments would have

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<sup>1</sup> This section was written by Eric Davis.

been able to play a stronger role in financing the System and would continue to do so when the economy recovers, which would substantially reduce the State funding required to deliver promised benefits to retirees.

Figure 22 on shows the trend in the State's annual contributions to MainePERS since 1993, the year in which *Dollars and Sense* was presented to the Maine Legislature and the public.



To permit comparison of contributions that occurred at different times, dollars have been adjusted to 2008 values using the Consumer Price Index. With only one noteworthy increase and a few dips, it can be observed that employer (i.e. State Government) contributions have remained relatively unchanged in real dollars since FY1993. In 1993, the employer contribution expressed in 2008 dollars was approximately \$346 million. By FY2007, the annual contribution had declined to \$336 million measured In inflation adjusted 2008 dollars, for a real decrease of -

2.9%. FY2008's \$318 million contribution was even less and far less than the 1993 contribution when considered in real dollars and represents a real decline of over 8% during the period. In contrast, the employee contribution increased by 37.7% between FY1993 and FY2007.

As discussed in other sections, employer and employee contributions are both significant sources of funding for the Maine Public Employees Retirement System (MainePERS) and are important complements to investments. Moreover, investment losses -- although often the largest -- are not the only claim on System assets. Every year there are promised benefits that need to be paid to eligible retirees and employee contributions that need to be returned to employees who withdraw from the System before acquiring vested status. These costs are taken out of System holdings and represent a growing annual deduction that must be taken into account when accumulated assets are calculated. Table 13 displays these benefit and withdrawal payments from FY1993 to FY2008 and compares them to contributions. Please note: The table does not show investment earnings, which have the largest impact on a retirement system's accumulated assets.

The ratio of active employees making contributions to retirees receiving benefits is often used as a quick gauge of the sustainability of a retirement system because as the number of retirees grows so do the size of annual pension benefit payments. Employee contributions can be a significant source of funding for retirement systems, but unless their size keeps pace with the number of retirees the per-dollar effect of each contribution will do less and less because these contributions are spread among more beneficiaries. To use a purely hypothetical example, if three employees each contribute \$100 to a fund that gives a \$100 pension benefit to one retiree there will be \$200 remaining for the fund to use for other purposes, such as investing in other assets. If the fund supports two retirees the remainder drops to \$100, and if it supports three

**Table 13: MainePERS Contributions and Benefit & Withdrawals**

in 000s of Real 2008 \$

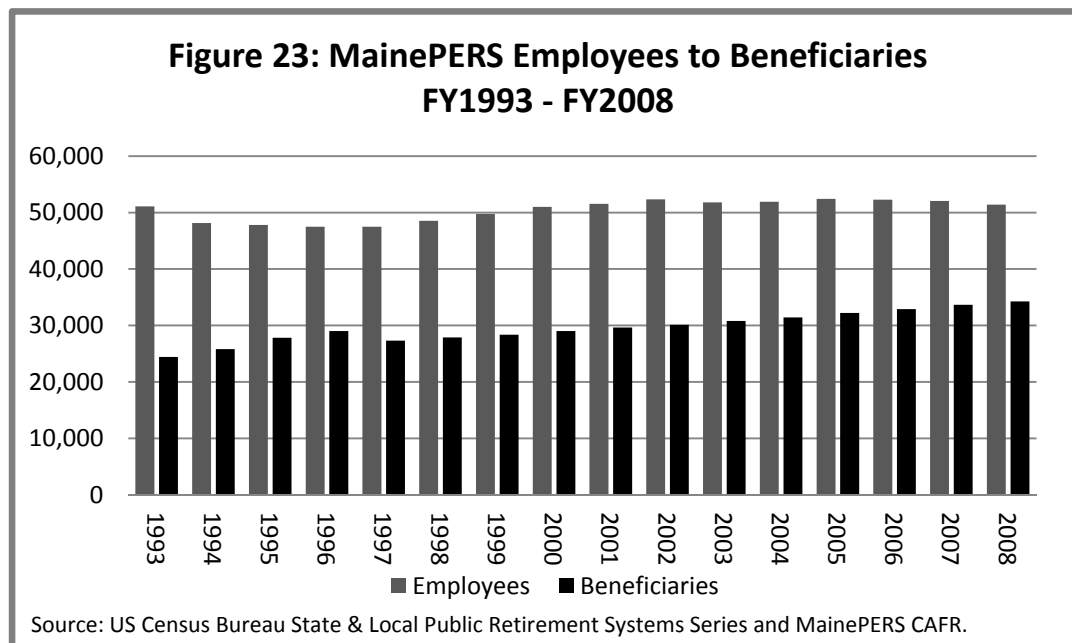
<b>Fiscal Year</b>	<b>Employee Contributions</b>	<b>Government Contributions</b>	<b>Total Contributions</b>	<b>Benefits</b>	<b>Withdrawals</b>	<b>Total Benefits &amp; Withdrawals</b>
1993	\$116,937	\$345,879	\$462,817	\$326,308	\$17,355	\$343,664
1994	\$129,493	\$276,291	\$405,784	\$341,277	\$18,710	\$359,987
1995	\$150,778	\$344,861	\$495,639	\$385,710	\$18,684	\$404,394
1996	\$141,500	\$348,062	\$489,563	\$391,812	\$20,789	\$412,601
1997	\$135,061	\$337,457	\$472,518	\$381,159	\$21,084	\$402,242
1998	\$143,351	\$362,961	\$506,312	\$406,795	\$23,428	\$430,223
1999	\$145,635	\$387,305	\$532,940	\$421,287	\$24,757	\$446,044
2000	\$147,390	\$322,906	\$470,296	\$429,251	\$22,099	\$451,350
2001	\$149,834	\$331,401	\$481,236	\$448,375	\$21,236	\$469,611
2002	\$156,017	\$507,270	\$663,288	\$474,407	\$18,936	\$493,343
2003	\$160,885	\$346,940	\$507,825	\$490,018	\$16,249	\$506,267
2004	\$161,362	\$344,430	\$505,792	\$506,749	\$18,015	\$524,764
2005	\$152,821	\$321,483	\$474,304	\$518,379	\$17,611	\$535,990
2006	\$154,213	\$343,781	\$497,994	\$537,219	\$20,193	\$557,413
2007	\$161,047	\$335,861	\$496,909	\$562,289	\$22,786	\$585,075
2008	\$150,523	\$317,758	\$468,281	\$576,346	\$27,309	\$603,655

Source: US Census Bureau State &amp; Local Public Retirement Systems Series

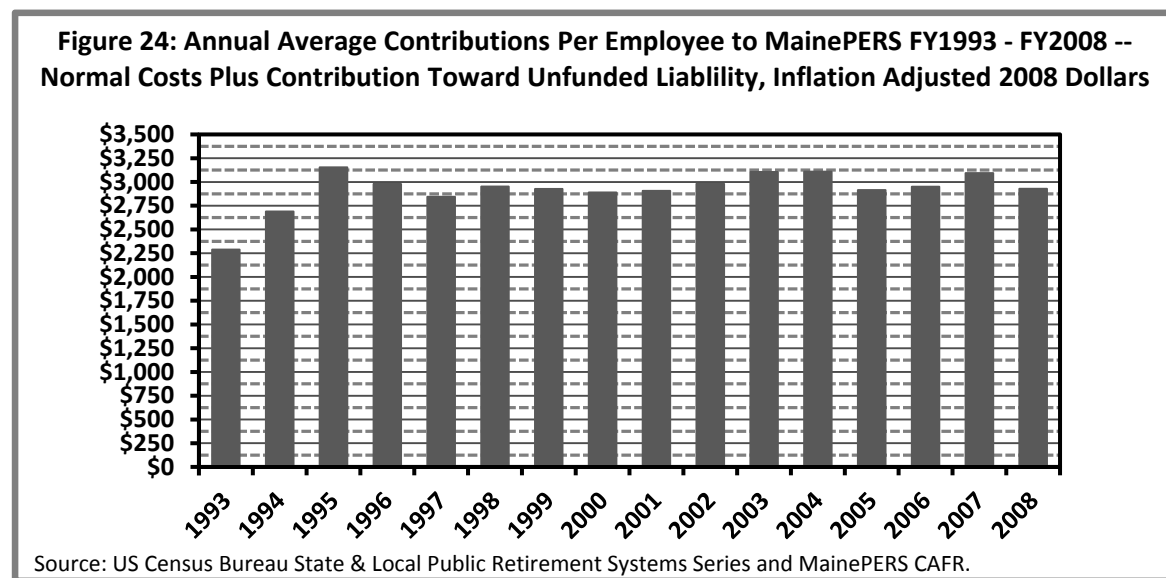


there is no remainder. Only by maintaining the same ratio of employees to beneficiaries or by increasing the size of employee contributions can the per dollar effect of employee contributions be sustained when the number of beneficiaries rises.

In the case of Maine, we have such a situation as described above. As Figure 23 shows, the number of active employees making contributions to the Retirement System has remained relatively stable over the past sixteen years, with a low of approximately 47,500 in FY1996 and FY1997 and a high of around 52,400 in FY2005. The number of beneficiaries receiving pensions through MainePERS, on the other hand, has steadily risen from approximately 24,400 in FY1993 to 34,300 in FY2008. This is a 40% increase and puts the FY2008 ratio of active employees to beneficiaries at 1.50, down sharply from 2.09 in FY1993. This downward trend is important because long term financial stability of the Retirement System depends upon adequate injections of funding to support current and future retirees, and if the per dollar effect of one revenue stream decreases it puts more pressure upon the System's other funding sources.



Some of this additional pressure has been alleviated in the Maine Public Employees Retirement System through growth in the size of the annual employee contribution which, because the size of Maine's public workforce has remained relatively unchanged over the past two decades, has taken the form of higher average annual contributions per employee. Legislative statute raised the percentage of salary state workers and public teachers pay into MainePERS from 6.5% to 7.65% effective FY1993, and from FY1993 to FY1995 the average annual per employee contribution grew from \$2,288 to \$3,155 in inflation adjusted 2008 dollars and has fluctuated around the \$3,000 mark ever since. This is an average increase of between \$700 and \$800 per employee and translates into an additional \$30 million to \$45 million annually in assets for the Retirement System. On the aggregate level, the size of the employee contribution increased 37.7% between FY1993 and FY2007 (28.7% if the recession-affected FY2008 is used as the terminus instead).

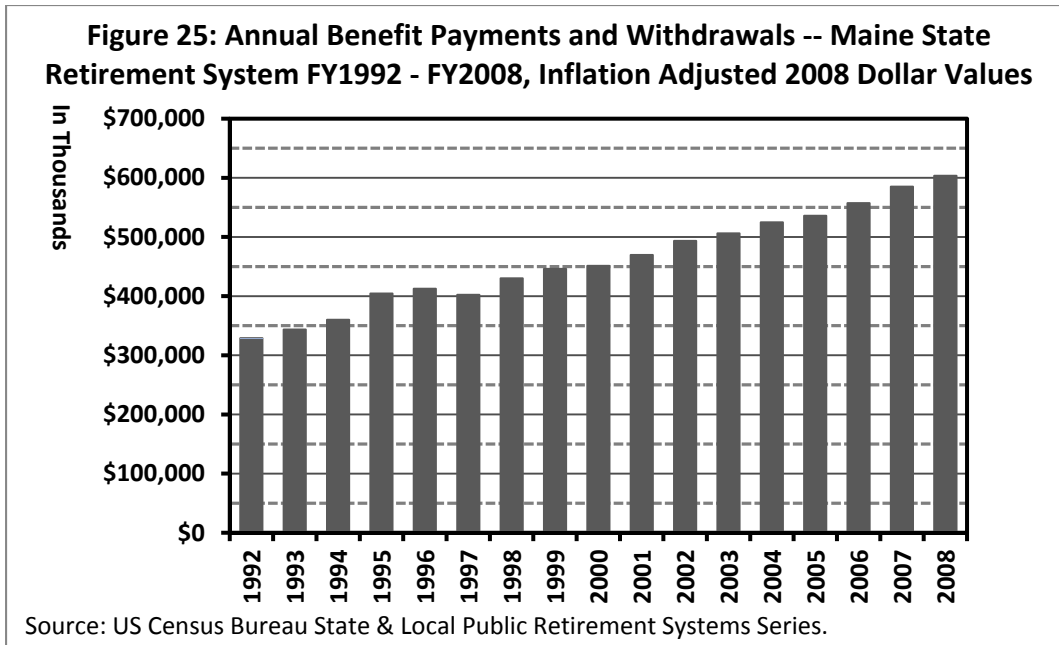


It is likely that some of this upward movement in annual employee contributions is attributable to an aging workforce in both state government and Maine schools. As public

employees advance in their careers and earn higher salaries, the percent of salary contributed to the Retirement System translates into more dollars. If this is in fact part of the explanation, it is important to recognize that annual contributions by employees will shrink as current employees retire and are replaced by lower pay personnel and/or as positions are eliminated. Consequently, the issue of forced and incentivized retirements should be considered within the context of the impact on System financing of the loss of employee contributions. Permitting employees to work for a few additional years will not boost the retirement payment greatly and will also reduce the number of years for which retirement benefits must be paid.

### ***Benefit Payments and Withdrawals***

As Figure 25 demonstrates, when adjusted for inflation annual benefit payments and withdrawals from the Retirement System have steadily and consistently risen over the past two decades regardless of prevailing economic conditions. More specifically, they have increased 75.7% in real dollar terms, from approximately \$344 million in FY1993 to \$604 million in FY2008.

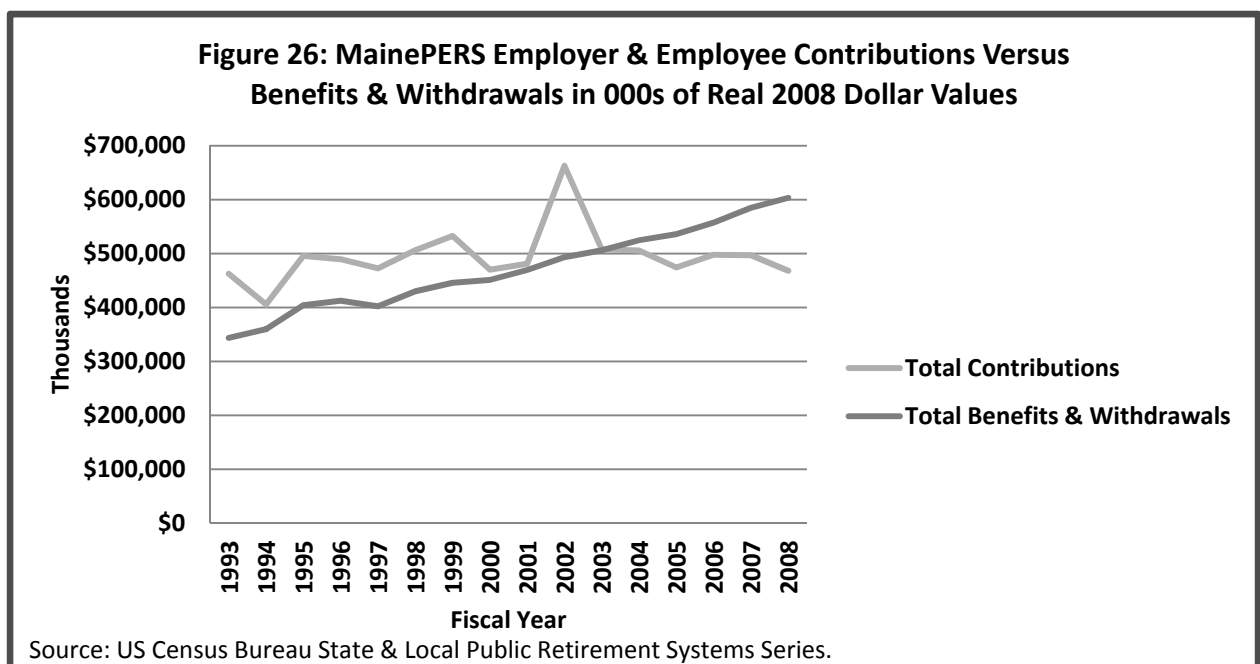


An examination of Table 14 shows that this growth has been driven largely by increasing benefit payments, and this upward trend is expected to continue as Baby Boomers retire and current beneficiaries live longer due to increases in American longevity. Moreover, although the trend seen in Figure 25 has heretofore been relatively linear and characterized by modest year-to-

<b>Table 14: MainePERS Statistics</b>	<b>Change 1993-2007, Not Adjusted for Inflation</b>		<b>Change 1993-2007, Adjusted for Inflation (2008 \$ Values)</b>	
	<b>\$s</b>	<b>%</b>	<b>\$s</b>	<b>%</b>
Total Receipts	\$1,747,947	386.6%	\$1,611,325	239.2%
Total Contributions	\$167,820	54.0%	\$34,092	7.4%
Employee Contributions	\$76,579	97.6%	\$44,110	37.7%
Government Contributions	\$91,241	39.3%	-\$10,018	-2.9%
Earnings on Investments	\$1,580,127	1116.2%	\$1,577,233	747.8%
Total payments	\$332,678	144.2%	\$241,411	70.2%
Benefits	\$322,387	147.2%	\$235,980	72.3%
Withdrawals	\$10,291	88.3%	\$5,431	31.3%
Accumulated Cash & Securities Holdings	\$11,618,954	503.9%	\$11,026,619	320.9%
<b>Statistics Recalculated with Recession-Affected FY2008 as Endpoint</b>	<b>Change 1993-2008, Not Adjusted for Inflation</b>		<b>Change 1993-2008, Adjusted for Inflation (2008 \$ Values)</b>	
	<b>\$s</b>	<b>%</b>	<b>\$s</b>	<b>%</b>
Total Receipts	-\$286,876	-63.4%	-\$508,435	-75.5%
Total Contributions	\$157,663	50.8%	\$5,464	1.2%
Employee Contributions	\$72,041	91.8%	\$33,586	28.7%
Government Contributions	\$85,622	36.9%	-\$28,121	-8.1%
Earnings on Investments	-\$444,539	-314.0%	-\$513,900	-243.6%
Total payments	\$373,006	161.7%	\$259,991	75.7%
Benefits	\$357,345	163.2%	\$250,038	76.6%
Withdrawals	\$15,661	134.5%	\$9,954	57.4%
Accumulated Cash & Securities Holdings	\$8,297,757	359.8%	\$7,167,836	208.6%
Source: US Census Bureau State & Local Public Retirement Systems				

year increases, the large number of expected Baby Boomer retirements will escalate benefit payments and increase the rate at which this annual expense grows.

Historically, total annual contributions from employees and State Government were greater than total annual benefit payments to retirees and employee withdrawals. This reduced the need for positive yearly investment earnings to fund the System and allowed more resources to be allocated towards paying off the unfunded actuarial liability. This changed in FY2004, however, when the annual expense of benefits and withdrawals overtook the annual income of employee and employer contributions, and this state of affairs has continued since then. This is a potentially troubling trend because it increases the System's dependency on investment earnings to cover expenses, reduces the effect years with strong investment returns have on accumulated assets, and amplifies the System's sensitivity to economic downturns. Barring increases in total annual contributions or an unlikely drop in benefit and withdrawal payments, this trend will continue into the near future.



The Maine Public Employees Retirement System (MainePERS) is funded by employee contributions, employer (i.e. State Government) contributions, and investment gains on accumulated assets. The first comprises the smallest share of revenue over the past two decades but is the most stable of the funding sources and grew over 25% in real 2008 dollars between FY1993 and FY2008. The employer contribution consists of a fixed percentage of payroll and the annual required contribution (ARC) necessary to retire the System's unfunded liability from underfinanced pension benefits, but the annual amount is ultimately a matter of Gubernatorial recommendation and Legislative decision making. Between FY1993 and FY2008 this revenue source shrank by -8.1%. Investment gains account for over half of System revenues earned between FY1993 and FY2008 and totaled over \$9 billion when adjusted for inflation in 2008 dollars. Annual investment returns are volatile and often mirror the U.S. economy. Thus, they can be negative and decrease accumulated System assets during economic downturns, and a sound investment strategy is one that yields positive investment gains over time and is able to weather recessions when a long term view is taken.

MainePERS loses assets every year from pension benefits that need to be paid to eligible retired employees (i.e., beneficiaries), employee contributions that are returned to employees who withdraw from the System before becoming vested, and -- in years when MainePERS's investments perform poorly -- investment losses. The recent recession has taken a significant toll on accumulated System assets but has not erased all of the progress made towards becoming a fully funded system since the early 1990s, and if historical patterns hold true these losses will be made up in future years by investment gains as the U.S. economy recovers. More troubling is the 75.7% increase in annual benefit payments and withdrawals from FY1993 to FY2008, an increase driven mostly by benefit payments as the number of retirees grow and American

longevity increases. This trend is expected to accelerate as the Baby Boomer generation retires due to their size and their high salaries, which means that their annual pensions may be larger (and thus more expensive) than their predecessors'. Baby Boomer retirement could also negatively affect annual employee contributions which are based on a fixed percentage of salary. When these high earners retiree, if they are replaced in the workforce by employees with lower salaries or not replaced at all the annual employee contribution will shrink.

All in all, the Maine Public Employees Retirement System is not in *immediate* crisis and has accumulated assets large enough to continue paying pension benefits to retirees for years to come. The System has experienced economic downturns and recessions before during the past two decades, and System assets still increased 209% from FY1992 to FY2008 in inflation adjusted 2008 dollars, rising from approximately \$2.64 billion to \$10.6 billion. With that said, the number of beneficiaries and associated costs continue to increase and the System has reached a point where total payments for pension benefits and employee withdrawals now exceed total contributions from employees and State Government. These are troubling developments, and unless action is taken to shore up the long term financial health of the Retirement System the State could find itself in a true crisis in the near future as the 2028 constitutional deadline for full funding approaches.

These are serious issues for Maine, particularly in light of the large number of baby boomers nearing a retirement age, which in the near future will increase sharply the number of beneficiaries. This shift will put sudden intense stress on funds by increasing the number of large payouts to new annuitants, while decreasing the fund's ability to pay those disbursements by decreasing the number of large-share contributors. As legislators in Maine determine the plan for the state, it is essential that they not only assess the current situation, but look forward to how



these ratios will affect the state's ability to keep its side of the bargain with employees five, ten and twenty years from now. The 5.5 percent state contribution determined to be "normal" by actuaries appears low for the state of Maine, given its ratio of employees to beneficiaries, and should be revisited in the face of the retirement system as the only source of post-retirement income for state workers and teachers.

## VIII. REFERENCES

- Alicia H. Munnell, R. W.-P. (2010, June). *Valuing Liabilities in State and Local Plans*. Retrieved April 4, 2011, from Center for Retirement Research: [http://crr.bc.edu/images/stories/Briefs/slp\\_11.pdf](http://crr.bc.edu/images/stories/Briefs/slp_11.pdf)
- Bender, K., & Heywood, J. (2010). *Out of Balance: Comparing Private and Public Sector Compensation over 20 Years*. [http://www.nirsonline.org/storage/nirs/documents/final\\_out\\_of\\_balance\\_report\\_april\\_2010.pdf](http://www.nirsonline.org/storage/nirs/documents/final_out_of_balance_report_april_2010.pdf); Center for State and Local Government Excellence and the National Institute on Retirement Security.
- Bowles, A. a. (1954). *Report to Legislative Recess Committee on Maine State Retirement and Social Security Coverage*. Augusta, Maine: Maine State Legislature.
- Brainard, K. (2009). *Public Fund Survey of Findings FY 08*. Retrieved 4 4, 2011, from Public Fund Survey: [http://www.publicfundsurvey.org/publicfundsurvey/pdfs/Summary\\_of\\_Findings\\_FY08.pdf](http://www.publicfundsurvey.org/publicfundsurvey/pdfs/Summary_of_Findings_FY08.pdf)
- Caron, A., & Osborne, D. (2010). *Reinventing Maine Government: How Mainers Can Shape a Sustainable Government and a New Prosperity*. South Freeport, ME: Envision Maine.
- Conant, J. K. (2010). Symposium Introduction: The Great Recession, State Budgets and State Budget Deficits. *Public Budgeting and Finance* 30 (1): 1-14.
- Constitution of Maine. (n.d.). Constitution of Maine. Article IX, Section 18-A.
- Fehr, S. C. (2010, August 31). Pension Fund Investments are Up, but Gaps Persist. <http://www.stateline.org/live/details/story?contentId=509250>
- Ghilarducci, T. (2011, April 7). Move Public Employees Into 401(k)s?: A Bad Deal for Taxpayers. *The New York Times* .
- Government Accounting Office. (2008, January). *GAO-08-223 State and Local Government Retiree Benefits: Current Funded Status of Pension and Health Benefits*. Retrieved April 4, 2011, from General Accounting Office: <http://www.gao.gov/new.items/d08223.pdf>
- Government Accounting Standards Board. (2006, March 16). *GASB White Paper: Why Governmental Accounting and Financial Reporting Is—and Should Be—Different*. Retrieved April 7, 2011, from Government Accounting Standards Board: [http://www.gasb.org/cs/ContentServer?c=Document\\_C&pagename=GASB%2FDocument\\_C%2FGASBDocumentPage&cid=1176156741340](http://www.gasb.org/cs/ContentServer?c=Document_C&pagename=GASB%2FDocument_C%2FGASBDocumentPage&cid=1176156741340)
- Government Actuarial Standards Board. (1994). *Actuarial Standard of Practice No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*. Norwalk, CT: Government Actuarial Standards Board.

- Greenhouse, S. (2011, February 28). Pension Funds Strained, States Look at 401(k) Plans. *The New York Times*.
- Hustead, E. (2009). Administrative Costs of State Defined Benefit and Defined Contribution Systems. In e. O. S. Mitchell and G. Anderson, *The Future of Public Employment Retirement Systems*. (pp. 97-104). Oxford:: Oxford University Press.
- IRS. (1991). *Internal Revenue Service: State and Local Government Employers - Revenue Procedure 91-40*. Retrieved April 7, 2011, from Interna: [http://www.ssa.gov/slge/revenue\\_procedure\\_91-40.htm](http://www.ssa.gov/slge/revenue_procedure_91-40.htm)
- Kim, A., & Kerrigan, H. (2010, August). *Pension Preparedness*. Retrieved April 15, 2011, from Governing: <http://www.governing.com/topics/public-workforce/pensions/pension-preparedness.html>
- LaPlante, J.M. (January, 1993). *Dollars and Sense: Maine State Budgeting at a Crossroads*. Portland, ME: The Edmund S. Muskie Institute of Public Affairs: University of Southern Maine.
- LaPlante, J.M. (2011) Seven Habits of Unsustainable Budget Building: A State Level Policy Perspective. *Journal of Public Budgeting, Accounting and Financial Management* 23 (2): 215-267.
- LaPlante, J.M. and Honadle, B.W. (2011) Beyond the Storm: Surmounting Challenges of the New Public Finance. *Journal of Public Budgeting, Accounting and Financial Management* 23 (2): 189-214.
- LePage, P. (2011, March 15). *LD 1043, An Act Making Unified Appropriations and Allocations for the Expenditures of State Government, General Fund and Other Funds, and Changing Certain Provisions of the Law Necessary to the Proper Operations of State Government for the Fiscal Years En*. Retrieved April 7, 2011, from Maine State Legislature: <http://www.mainelegislature.org/LawMakerWeb/summary.asp?ID=280040546>
- LePage, G. P. (2011). *State of Maine Department of Administrative and Financial Services: Bureau of the Budget*. Retrieved February 27, 2011, from Governor LePage's Proposed Biennial Budget for 2012-2013: <http://www.maine.gov/budget/budgetinfo/2012biennial.htm>
- MainePERS. (2005). *Maine State Retirement System Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2005*. Retrieved February 8, 2011 from the MainePERS website: <http://www.msrs.org/PDFs/other%20publications/05ar.pdf>
- MainePERS. (2007). *Maine State Retirement System Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2007*. Retrieved February 8, 2011 from the MainePERS website: <http://www.msrs.org/PDFs/other%20publications/07cafr.pdf>

- MainePERS. (2008). *Maine State Retirement System Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2008*. Retrieved February 8, 2011 from the MainePERS website: <http://www.msrs.org/PDFs/other%20publications/08cafr.pdf>
- MainePERS. (2009). *Maine State Retirement System Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2009*. Retrieved February 8, 2011 from the MainePERS website: <http://www.msrs.org/PDFs/other%20publications/09cafr.pdf>
- MePERS. (2010, March 8). *Maine State Employee and Teacher Unified Retirement Plan Taskforce Report*. Retrieved April 7, 2011, from Maine Public Employee Retirement System: <http://www.msrs.org/PDFs/other%20publications/MainePERS%20Final%20URP%20Task%20Force%20Report%203-9-2010.pdf>
- MainePERS. (2010). *Maine State Retirement System Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2010*. Retrieved February 8, 2011 from the MainePERS website: <http://www.msrs.org/PDFs/other%20publications/10cafr.pdf>
- MainePERS. (2011, February 11). *Report on Pension Costs to the Legislature of the State of Maine*. Retrieved April 7, 2011, from Maine Public Employees Retirement System: <http://www.msrs.org/PDFs/Leg%20Pension%20Cost%20Request%20FINAL%20DRAFT.pdf>
- MainePERS. (April 15, 2011). *Report on Pension Costs to the Legislature of the State of Maine*. Retrieved April 24, 2011 from the MainePERS website: <http://www.msrs.org/Pensions/Leg%20Pension%20Cost%20Request.pdf>
- MainePERS. (n.d.). Retrieved June 18, 2011, from Maine Public Employees Retirement Systems: <http://mainepers.org/Pensions/Proposed-Changes.htm>
- MainePERS. (n.d.). *The Organization*. Retrieved June 25, 2011 from the MainePERS website: <http://www.mainepers.org/About%20MainePERS/The%20Organization.htm>
- Mendel, E. (2011, February 3). Moody's Begins Treating Pension Liabilities like Bonded Debt. [calpensions.com](http://calpensions.com) .
- Monahan, A. B. (2010). Public Pension Plan Reform: The Legal Framework. *Education Finance and Policy* , 617-646.
- National Conference of State Legislatures. (2011, January 3). *NCSL Fiscal Brief: Top Fiscal Issues for 2011 Legislative Sessions*. Retrieved April 7, 2011, from National Conference of State Legislatures: <http://www.ncsl.org/documents/fiscal/TopFiscalIssues.pdf>
- National Conference of State Legislatures. (2011, February 8). *Facts on State and Local Government Pensions*. Retrieved April 15, 2011, from National Conference of State Legislatures: <http://www.ncsl.org/documents/press/jppfactsheet.pdf>

- Snell, R. (2010, June). *Defined Contribution and Hybrid Pension Plans*. Retrieved April 4, 2011, from National Conference of State Legislatures:  
<http://www.ncsl.org/LinkClick.aspx?fileticket=yGsmFhwoq7E%3D&tabid=18511>
- Social Security Administration. 2011. Social Security Online - State & Local Government Employers. (February 9, 2011). *Revenue Procedure 91-40*. Retrieved June 25, 2011 from the Social Security Online website: [http://www.ssa.gov/slge/revenue\\_procedure\\_91-40.htm](http://www.ssa.gov/slge/revenue_procedure_91-40.htm)
- U.S. Census Bureau. (2011). *State & Local Government Finance*. Retrieved February 7, 2011 from the U.S. Census Bureau website: <http://www.census.gov/govs/estimate/>
- U.S. Census Bureau. (2011). *State & Local Public Retirement Systems*. Retrieved February 7, 2011 from the U.S. Census Bureau website: <http://www.census.gov/govs/retire/>
- Waring, M. B. (2009). Between Scylla and Charybdis: Improving the Cost Effectiveness of Public Pension Retirement Systems. In e. O. S. Mitchell and G. Anderson, *The Future of Public Employment Retirement Systems* (pp. 58-74). Oxford: Oxford University Press.
- Wiatrowski, W. J. (2009, February 25). *The Structure of State and Local Government Retirement Benefits, 2008*. Retrieved April 4, 2011, from The Bureau of Labor Statistics: Compensation and Working Conditions Online:  
<http://www.bls.gov/opub/cwc/print/cm20090218ar01p1.htm>
- Woodbury, Richard. 2010. *Population Aging and State Pensions in New England*. New England Policy Center Research Report 10-1.  
<http://www.bos.frb.org/economic/neppc/researchreports/2010/neppcrr1001.pdf>